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Wales and the Animal Industry*

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When it was decided to form a Welsh Branch of the National Veterinary Medical Association and that I should be its first President, it seemed to me highly desirable to keep in mind the traditional struggle between North and South, and being a Northerner I concluded that since the Presidential honour had gone North the South should not be forgotten; therefore, in an effort to preserve this balance, I wrote to the Lord Mayor of Cardiff and suggested that, as this would be an epoch-marking occasion—the occasion when Wales was securing a little measure of that home government to which many of us aspire—he might see fit to entertain us. A ready acquiescence was his characteristic reply, and so we are enjoying the hospitality of this magnificent civic centre. I have been here many times in connection with many different movements. The more frequently I come, the greater is my admiration for Cardiff. I know of no other centre in Europe outside Vienna where the inherent love of that which is beautiful is so adequately translated into concrete form as it is in Cardiff in the magnificent series of public edifices that adorn Cathays Park, the pride of all Welshmen and the envy of all others. I would that my address could be confined to a full expression of the sentiments I feel towards those whose foresight and wisdom evolved this wonderful permanent testimony to our race. Just as the monument to the Girondins is to me in relation to Bordeaux, so Cathays Park is my abiding impression whenever I leave Cardiff. When to this is added the magnificent old Castle, Cardiff is making a powerful claim to the location of our Capital here when a full measure of home government is secured.

You will conclude that I am a Home Ruler. Well, I am, in so far as there are many things that can be better done locally and with local knowledge, and my first introduction to the question was through the domestic animals, for as far back as 1910 I found myself giving evidence in support of a separate Board of Agriculture for Wales. Associated with the movement at that time were such stalwarts as John Hinds and E. T. John, both South Wales boys—one became the founder of a great business in London, the other one of the makers of modern Middlesbrough—but they were men of the type that were concerned with the welfare of their native country notwithstanding the enormous and varied interests in which they were involved. It was felt that Wales had problems that were peculiarly her own and that there was no better illustration of this than that provided by agriculture. At that time very little attention was paid to the animal side. Whenever the term agriculture was mentioned the mind inevitably seemed to turn to the soil and its products.

In 1914 a conference was summoned at Carmarthen consisting of some members of Parliament and representatives of various local authorities throughout Wales. It was convened under the auspices of a body known as the Welsh Rural Development and Agricultural Association of which Mr. E. T. John was President. It was my privilege to be invited to submit for discussion a scheme of higher agricultural education for Wales that would comprehend the facilities of the three constituent Colleges of the University. In the scheme it was proposed to split agriculture up into its three great divisions, *i.e.*, horticulture and forestry, animal husbandry and veterinary science, and agriculture, or more correctly, agronomy—the soil and its other products.

It was proposed that in the University of Wales a Faculty of Animal Husbandry and Veterinary Science should be established—not a department but a complete Faculty with its full complement of departments and professorships. The scheme was discussed, approved and published by the Association.*

Then later arose the necessity for the complete reorganisation of the University of Wales. A Royal Commission, under the chairmanship of that master of education Lord Haldane, was appointed.

Again it fell to my lot to place before the Commission the proposals for Faculties that would deal with the component parts of agriculture, and to deal especially with the proposed

*Presidential Address to the Welsh Branch, N.V.M.A., on the occasion of the first meeting of the Branch, held at Cardiff, March 17th, 1939.

*SHARE JONES: "Higher Agricultural Education in Wales." Cardiff. 1914.

Faculty of Animal Husbandry and Veterinary Science. I was then connected with an English University, but I am proud to say that no institution was ever blessed with men at the helm possessed of broader views or keener vision and appreciation of national needs, as distinct from parochial, more or less selfish, institutional requirements and benefits. I am referring to men like Lord Derby, Sir Alfred Dale, Sir Rubert Boyce, Mackay, Hope, Sherrington, Ross, and others.

We in Liverpool were the nearest institution to Wales. We might lose a few students, we might have to share other things, such as any grants or other funds. But this was not the issue to big minds. The issue was whether it was in the public interest that in the national University of Wales provision should be made for the sons of Wales to be trained in Wales to enter the profession of their choice, and, having entered, to become members of their own University. The University of Liverpool came to the conclusion that such provision should be made if these wider interests were to be best served, and not only did they not object, but they actually deputed me to render any assistance that I might be called upon to give. Scores of local authorities in Wales passed resolutions in support, and a petition was submitted from the North Wales Miners' Federation, which I was asked to debate before the Commission. What was asked was that Welsh boys should have the same facilities as the boys of England and Scotland enjoyed. No enthusiasm was exhibited before the Commission by the constituent colleges and a golden opportunity was lost, for one cannot expect another Royal Commission at least in the time of the present generation. The Commission decided that since Liverpool was in close proximity to Wales it might cater for Welsh needs. But Liverpool has not been able to meet the demand, for during the past few years, on the direction of the University authorities, admission to the School of Veterinary Science has been refused to roughly 50 per cent. of young men and women, who were qualified to enter and who wished to come. Included amongst these were many from Wales. Notwithstanding these restrictions on the entry there are at present in Liverpool 161 students, of whom 118 are taking the University Degree in addition to the licensing Diploma. When I say that the course for the Diploma of M.R.C.V.S. entails a residence of five years, and that for the Degree five-and-a-half years, at the University, it will be seen what a substantial contribution is made to the life and effort of the University. If these figures be compared with those representing the numbers reading for degrees requiring much shorter courses in agriculture, forestry or horticulture in all the Welsh colleges combined, the relative magnitude of these divisions in this respect will be at once apparent. But for restrictions, the number in Liverpool might easily have exceeded 300.

It is interesting to compare veterinary science with human medicine in relation to the University of Wales. When we were anxious that Welsh boys and girls who wished to enter the medical profession should be educated in Wales, there already existed on the borders of Wales medical schools at Liverpool, Manchester, Birmingham and Bristol. These might, and could, readily have catered for Welsh students. Not only was the proposal to establish a Welsh school not opposed, it received most cordial and general support, and Welsh medical students were given the opportunity of becoming graduates and thereby part of their native University and a permanent asset to their country.

I remember drawing public attention to the fact that although there existed in Wales such a profound respect for learning and desire for graduation, the University of Wales did not cater for any of the professions that required a legal licence to practise. Human medicine was taken as a popular example. At that time 70 per cent. of the students in the Welsh colleges were passing through the Faculty of Arts. It was not difficult to create an atmosphere favourable to the establishment of a medical school. The family doctor is familiar to the public. The speech was largely accidental but it attracted a good deal of attention, and obtained wide publicity, being strongly backed by those grand provincial journals with a warm corner for Wales—the *Liverpool Daily Post* and the *Manchester Guardian*.

But with veterinary science the problem was, and still is, much more difficult. It is a science about which the public seem to have very little knowledge. In Wales this is particularly notable. There is little appreciation of the real mission of the veterinary profession and in some parts public opinion has not advanced beyond that which might be comparable to the barber-surgeon age. There are stretches of country 20 miles in extent without a single qualified person. Yet Wales is pre-eminently a livestock country. It has long been officially recognised that the nature of the country is such that it must remain essentially livestock-producing. In a great county like Merioneth, which depends almost entirely upon her domestic animals, and which covers such a large area, there are only two qualified persons. There is no part of the Empire where there is such lack of appreciation of the services which this branch of science might render. Attention during the past few years has been directed to the question of quackery. But the position in

Wales, in my opinion, is not affected to any marked degree by quackery as the term is commonly understood. There is little objection to the person who frequently renders simple first aid and other services in areas where no other help is available, and who is often very capable.

The position in Wales is that veterinary science is not used as it is in other countries. To some degree the same can be said of Britain as a whole, for the output of qualified persons in proportion to the population is much lower than in any other great country. I gave figures relating to this in 1912 and have given them repeatedly since.

There exists, however, quackery of a totally different form and which operates in a much more subtle manner, for there are hordes of people holding important offices and in official positions in the animal industry—positions that should demand a thorough knowledge of the normal and abnormal structure and functions of the bodies of the animals, who could not profess the slightest knowledge of veterinary anatomy or physiology. It is sometimes claimed that they are practical people, but surely no person can deal practically with any machine unless he knows its structure. How can he judge it or put it right unless he knows what it is? How different the position is in relation to the human being. At once it is recognised that the medical man with his basic knowledge of anatomy and physiology is the final arbiter in any judgment of the man's body, the housing of it, the feeding and care of it, and of his general physical well-being.

This ought not to be the condition of affairs in a country such as Wales, where there is such a strong inclination to the domestic animals. To me there is one important factor operating, to which attention has not been sufficiently drawn. I have mentioned it before. It is the effect upon the public attitude towards a division of education which develops when a school dealing with that division is instituted in an area. The establishment of an educational institution in an area not only provides facilities for students and for the conduct of research work, it has an educational effect upon the general public in the area. It attracts public attention, and arouses and stimulates interest. It becomes in time part of the communal life. That is what has been lacking in Wales. The inherent love of animals is there, as is also a natural aptitude for dealing with them. But the lack of an organised scheme of education relating to them has meant a failure to appreciate the manner in which knowledge can be co-ordinated and applied to them. That failure is revealed in the condition in which we find the animal industry in Wales to-day.

The avenues to education in all branches that are not only concerned with the evolution of the citizen, but which also have a direct bearing upon his material welfare, should be thrown widely open. I remember the times of my youth when we had no University in Wales. We have made some progress since, but if effect be given to a report that has been issued to the Government Departments concerned of this country the opportunity for Wales to provide facilities for its own people in this branch of education—a branch for which its people are by virtue of their native soil, climate and indigenous stock and environment pre-eminently fitted, a branch of education which is essential to the development of the natural resources of Wales—the door is permanently barred and bolted so far as any blessing it might ever receive from the State. The report actually names a number of institutions for public benefit and even urges that other universities should be discouraged from engaging in the work.

Since 1903 there has occurred in this country a most wonderful development of educational facilities. In this short period of 36 years we have established the magnificent chain of provincial universities at Manchester, Liverpool, Leeds, Sheffield, Birmingham, Bristol, Reading, etc. More are on the way. The one great principle underlying this is to carry educational facilities to the people. The avenues to most of the licensed professions are now widely opened to the youth of Britain irrespective of the wealth and social position of their parents. The ability of the individual is the passport. It is directly opposed to the attitude taken towards veterinary education which seems to have been regarded as a kind of plaything to which great and clearly recognised principles cannot be applied. It is considered as a weakly infant in constant need of a nurse! And it is indeed amusing to note the number and kinds of nurses who have regarded themselves as specially ordained for the purpose of placing veterinary education "on its feet." We who have made it our life's concern, are fully conscious of the place where it would have been deposited had their desires been granted.

Since 1912 to my personal knowledge committees dealing with veterinary science have been endeavouring to ascertain to an amusing degree of mathematical accuracy, the number of workers this country needed to provide it with an efficient veterinary service. So far from being anxious to expand and develop the service and apply it to the nation's resources there appears to have been a feverish anxiety lest it should expand at all. In the year mentioned they were anxious as to the supply of an adequate number of suitably qualified workers. Yet it was put to them quite definitely that if this science were to develop it should receive

its fair proportion of the best brains of the country and that proportion it would not secure so long as the facilities for entry to this field of work were not equal to those for entry to others. The case of a South Wales boy was cited. Would a South Wales boy who was equally eligible to become a veterinary or a medical scientist and to whose family finance was a serious consideration, go to London or Liverpool to become a veterinary surgeon? As a rule he would not be likely to pass the University of Bristol or the University College of Cardiff, but would perforce select one of the other professions for entry for which local provision was made. He would, as I have said, be equally suitable for the medical profession.

But when attempting to estimate the nation's needs this latest committee have arrived at a most extraordinary conclusion. They have actually recommended that facilities should be provided for entry of more workers from Scotland than from England and Wales combined. There appears to me no reason whatsoever for this privileged treatment of Scotland.

During my time many departmental committees have been appointed to deal with the problem of veterinary science and education. What most seem to have been in agreement upon is that our science is something that is in dire need of extraneous assistance—the nurse to whom I have referred—not a solitary committee seems to have had the courage to tell the Government that here was a science to which men and women were prepared to devote their lives; give them all the support you can and give them the opportunity that has been given to workers in other divisions of learning —the opportunity of taking charge of and developing their own business. Place adequate financial resources at their disposal, but if responsibility be imposed upon them as it is in other sections of education, these people should simultaneously be invested with authority.

That has not been done and it is not proposed to do it now. If they are to receive adequate financial assistance—that assistance which it is in the national interests that they should have and to which they are entitled—it seems that that would not be forthcoming unless the workers are prepared to surrender much of their freedom of action and most of their authority.

If anyone doubts the capacity of the workers in this field to conduct their own affairs then I would like to point out that no other profession or division of education has made such outstanding progress during the last 30 to 40 years. When I embarked upon my student career the course had just been raised to four years, *i.e.*, three years and nine months' residence. It had previously been two years and nine months. To-day it is five years, and for a full degree, 5½ years. Moreover, the students in Liverpool, where the opportunity is afforded them of competing with others on similar terms, can show a record of achievement second to none. Testimony has been given the governing body of the profession again and again of the manner in which, by its own unaided efforts, it has contributed to the elevation of our profession.

But one of the outstanding features of the "series" of Departmental Committees to me is the strange variety in their findings. The Committee of 1912 would have extinguished the facilities at Glasgow and Liverpool but for the strenuous opposition that was raised. The Batchelor Committee would have extinguished the Glasgow institution. The Loveday Committee recommend that the fourth centre must be in Glasgow. The Martin Committee claimed that a properly equipped veterinary school should have its full complement of departments, each under a professor with a complete staff of lecturers and other assistants, and that to place the professor on the level required by the University the stipend should not be less than £1,000.

According to the Loveday Committee there is to be no veterinary professor in the University of Glasgow and the veterinary departments in the University are to be placed under readers or lecturers, the head of the Department of Veterinary Anatomy to receive £700 to £800, the Head of the Department of Veterinary Pathology, £800 to £900. Anyone with the slightest knowledge of University organisation will know full well what this means, and the struggle that will be entailed to raise these positions to the level of those enjoyed by the representatives of the corresponding subjects in human medicine.

The Reid Committee created a large number of positions for veterinary officers in the Colonies, although it knew at the time that suitable persons did not exist to fill them. But they came and a magnificent service has been the result. Surely these are things that have a tendency to right themselves.

So much for the guidance of Departmental Committees.

What is Wales to do? If it depends upon Departmental Committees the door is closed. How futile! How contrary to the very spirit of education!

Here is a country with livestock as its greatest asset—Wales has been endowed with the finest indigenous livestock on the face of the earth. There is no finer mutton than that produced by the Welsh wether, there are no better cattle than the black Welsh for the dual purpose of meat and milk production, while the courage and stamina of the Welsh

cob are admired by horsemen the world over. Here are people with a natural aptitude for biology in its widest sense—true sons of the soil, people with a real love for their country and a readiness at all times to give of their best in its interests. Yet with these invaluable requirements at hand that should in themselves generate success, we find the animal industry in Wales in such a parlous state that it is in danger of collapse. Instead of progressing the industry has been allowed to decay until a complete rot seems to have set in. This may in some degree be due to a misconception of the term "agriculture." I have already mentioned how, not many years ago, whenever this term agriculture was used the mind inevitably turned to soil. Few attributed much importance to the animal industry division and still fewer would consider this to be the most important division of agriculture in this country. So little thought was given to the matter that it was not until the early 'twenties of this century that any real attempt was made to ascertain the value of our livestock. Then it was calculated that the three food-producing species alone represented a capital sum of no less than the colossal figure of £400,000,000 to £450,000,000. We are excluding that most valuable animal—the thoroughbred horse. In Wales this feature of the problem is much accentuated for there are thousands upon thousands of acres that are only of use in animal husbandry. It was not until 1928 that the animal industry attracted the serious attention of our political parties. We can never hope to compete as a wheat-growing country with such countries as Canada, in comparison with which we are hopelessly handicapped from the outset by our soil and climate. But our soil and climate are eminently suited for the successful pursuit of animal husbandry, and in this division we should stand supreme. Instead of progressing or at least holding our own we have been slipping back. Let us take two or three cases. We have looked on and observed our mutton being ousted from our own market by the imported commodity. In my youth we had an established connection between Wales and the London market direct. The sheep were bred, reared, fed and killed in Wales. The tail ends were not removed but the wool washed. This indicated the fresh home product. The saddles were sewn in new calico and placed in clean casks purchased for sixpence each from the local grocer. A layer of new calico was nailed across the top of the casks and the meat arrived in London as it left Wales, notwithstanding rough usage during transport. That hygiene was much superior to the hygiene of to-day as any one will agree who observes the imported meat flung about at railway junctions, protected only by thin muslin. There was no inspection, at least at our end. The meat satisfied the keen judges who were our agents in London and we obtained much the highest price on the market. At that time what was called foreign meat was sold to the Welsh workmen at less than half the price of Welsh meat. It was openly recognised as an article of inferior market value to our own. There could then be no objection to it. Our own working men were able to obtain meat in quantity at a low rate and it kept their wage at a high purchasing value. But the preservation of our market seems to have been the concern of no one; the result is that the imported article has gradually replaced the home product through constant and systematised eulogy and advertising, whilst the price of the imported meat has been gradually raised until the cost of a leg of Canterbury lamb approximates quite closely to that of one of the best home breeds. The British workman has not derived any benefit from this change.

Again, when giving evidence before a departmental committee on a milking cow on a cheese farm it was not permissible to refer to the pig; that animal belonged to a separate committee. Yet a successful cheese farm with 100 cows in full milk necessarily means about 650 pigs, the by-products of the cheese being the basic food for the pig. The Medical Officer of Health for Nantwich, controlling the greater part of South Cheshire, made an official complaint against the pollution of water courses with the whey from the modern centralised cheese factories—whey that should have been fed to the pigs.

In connection with an article which was published in *The Times* I had occasion to enquire into the prices secured for some of the by-products of animals as compared with the prices before the Great War. The following interesting sums were published from the returns of an average butcher in an ordinary country town and killing three oxen and 50 sheep a week:—

Pre-War Period	£	s.	d.
3 hides at 6d. per lb.	4	10	0
50 sheepskins at 3s. 3d. each ...	8	2	6
100 lb. fat at 3d. per lb.	1	5	0
50 "strings" at 6d. each... ...	1	5	0
	£15	2	6

To-day			
3 hides at 2¼d. per lb.... ...	1	13	9
50 sheepskins at 4d. each ...		16	8
100 lb. fat at ½d. per lb.		4	2
50 "strings" at 1d. each... ...		4	2
	£2	18	9

There has been some improvement in price since, but the difference represents a loss to the industry, at a low estimate, of £200,000 a week. But the iniquity does not end here. The materials were purchased by a foreign buyer and shipped abroad. Here is represented a tragedy that has been going on before our very eyes. Scattered over the countryside, and especially in Wales, there are derelict little factories and mills that have long closed down. They dealt with raw materials derived from animals, and particularly woollen and leather goods. But the raw material that once supplied them is now practically given to the foreigner and gives employment in countries from which we are frequent buyers of the finished article.

There are other types of leakages, such as the enormous loss due to the indiscriminate marking of sheep. In this case, as applied to an individual, the matter appears too trivial to deserve attention, but in the aggregate the loss is so great as to be a distinct menace to international trade such as threatened the trade of U.S.A. with South Africa in wool a few years ago.

I mention these as samples of numberless instances to show that in this country agriculture is treated in separate, small watertight compartments, and each section is dealt with as an entity separate and distinct from the rest and without any regard as to how the manner of dealing with it affects the rest of the industry or the industry as a whole.

Regarding the animal industry as the major division of agriculture in this country, and particularly so in Wales, when considering the problem we should constantly have before us a definition of animal husbandry as being "the production, care and development of the domestic animal and the use of its products and by-products, during life and after death, with the object of securing from them the maximum benefits to the community."* It will be seen how lamentably we fall short of this definition when dealing with the manufacture of cheese, for example, and neglect to consider simultaneously the pig. Time will not permit me to go through the various species, but to us in Wales the sheep provides a case of neglect that is so striking that I ask permission to deal with this animal in greater detail. As I have said, we in Wales have a wonderful endowment in our native sheep. But the country does not use the animal that the farmer provides. In no sense can it be said that when dealing with the sheep we meet the definition laid down. If you glance once again at the two little sums I gave you will notice that the most glaring losses are in connection with the sheep. The leakage in the price of the skin alone (even admitting that a considerable advance has taken place since the prices were quoted) is sufficient to provide a means of saving the sheep from the grave crisis into which it is being precipitated. Here we see the raw materials for the manufacture of woollen and leather goods almost given away, while the return required by the farmer for the whole sheep is extracted from the meat —from the food portion which directly affects the wages question and through this every other industry. Nothing could strike more forcibly against the national interests. So restricted has become the view of this species that the sheep seems to be thought of only in terms of mutton. The remainder of its possibilities as a source of revenue seems to have been forgotten.

So haphazard has been our method of dealing with the industry that we have allowed ourselves to drift into the position of importing for our own consumption more than 50 per cent. of the following foodstuffs: Beef and veal, mutton and lamb, meat derived from the pig, butter, cheese, milk and milk products. Furthermore we have neglected means of providing labour for the rural population in the country where rural industries can be conducted in healthy and congenial surroundings.

In a country possessing the finest natural machine for production in the world this is nothing less than a national disgrace.

I made an appeal in *The Times* for a comprehensive investigation into the whole problem of agriculture as it presented itself in Britain and especially on the side which particularly concerned us, namely, the animal industry. The appeal attracted a good deal of attention and I received a number of interesting communications concerning it. One is worthy of repetition here. It came from one of our most distinguished peers, who is not a member of the political party to which I have belonged, but whose name I withhold since it was a personal matter. It reads:—

"I have read with the greatest interest your letter in *The Times* this morning on 'Animal Husbandry.' I find myself in very considerable agreement with all you say, although I do not profess to have any special knowledge on the subject; but perhaps I may mention to you a conversation which I had just after the War with an old friend of mine in ———. This man had been a farmer in the Eastern Counties all his life, and his ancestors before him. He told me that he was sure that the policy of arable farming in the Eastern Counties was wrong—that the Eastern Counties were intended by nature for sheep running, and that with the

*Share Jones: "The Relationship of the Veterinary Surgeon to Animal Husbandry." International Veterinary Congress, London, 1930.

economic pressure which is bound to come they would inevitably drift to sheep, and as a sheep country he was persuaded that successful farming could be carried out.

"I was particularly interested in your suggestion for small factories for the utilisation of the by-products of animals on the spot. Your contention is, if I understand your letter rightly, that the backbone of British agriculture is livestock and not arable, and with this point of view I have always found myself in agreement. I feel sure that you are right in suggesting that the matter is one that is deserving of thorough investigation, and that such an investigation may, as you point out, lead to far-reaching recommendations which, if carried out, might cause as great a revolution in British agriculture as took place in Danish agriculture some 50 years ago.

"I fear really that our trouble is that people are too deeply rooted in ancient custom in this country to undertake a comprehensive change which would in all probability entail a preliminary expenditure of capital.

"At the same time one feels that if something is not done of a comprehensive nature our agricultural industry must continue to decline, for although the Government will, I am sure, do everything they can, it is really the industry itself that must organise itself on new lines."

To anyone following the problem the wisdom of the above letter becomes daily strengthened. However anxious and willing some might be to help, the solution must come from the industry itself. The solution of the problem of the sheep lies inherent in the body of the sheep itself. It cannot be solved by the application of such instruments as tariffs or quotas or the giving of subsidies. These are merely temporary expedients. It will come through the organisation of knowledge and its intensive application. Here is a little illustration from the sheep of which I can speak first hand. An organisation with which I was connected was much concerned with the drift of the population from the countryside to the town. Expressions of the known facts, and the passing of resolutions might be pure lip service. If the drift is to be prevented labour must be found for the people in the country.

We found two little derelict flannel mills. They had been at one time very prosperous concerns, but they had long been closed down. Welsh flannel had passed out of favour and there was little market for it. So we decided to try to make something for which there was a market. We fixed on a white blanket—a commodity which had never before been made in that valley. A large distributing concern became interested in our experiment. We found a few old men who were working in the mills years ago, and we engaged some bright boys from the school on the recommendation of the master. Well, after much experiment and with much help and advice from the expert of the distributing concern we succeeded in producing a white blanket which was second to none; in fact, a written offer was made to place an order for 10,000 pairs on a sliding scale of prices. The old men revived, the boys showed a splendid aptitude for carding, spinning and weaving, and one became in a short time quite a good wool sorter, work that requires a high degree of skill. We also produced a good tweed. What was demonstrated was this. The main essentials were present: the raw material—the sheep could be seen through the windows of the mill; adequate power—water power, which is the latest, cost not more than ten pounds a year for two little mills—and thirdly, a highly intelligent labour. They produced an article for which there was a market and that we regarded as a decided achievement. Surely with these essentials present what is required to complete the case is business organisation. Similarly, one could experiment with the little tanneries, oil refineries and others—all associated with the animal industry.

But this is one little incident; as I have urged, the animal industry problem must be surveyed as a whole. It is becoming obviously more apparent that we must increase our home production. But we must also sell our products. The housewife is the farmer's ultimate customer for his food and the wearer or user the ultimate customer for other goods.

The problem of the sheep, for example, involves the whole story, from the birth of the lamb to the consumption of the mutton and the use of the blanket or tweed or the stringed instruments or oils or any other commodity requiring some part of a sheep as raw material in its manufacture.

To be successful we must pay regard constantly to the whole story and this is in accordance with our definition. But cohesion between the various factors does not exist in Britain and this is where our failure lies.

Minister after Minister has foundered on this rock. Surely this has not been for lack of ability, for gentlemen of such eminence as to be marked out ultimately even for the highest position in the State have in our time come to grief. It would be impertinent on my part to name them. Their names are household words.

The fact is that in Britain a proper conception has not hitherto been formulated at the top, either in Whitehall or the Universities, of the magnitude of the problem, and a first-rate problem cannot be solved if the conception of it be third-rate.

I know this to be the case from actual

experience in our educational institutions and from such association as I have had with Whitehall, in both of which the intentions are of the best.

Governments will, I am sure, do all they can, but, as was said in that charming letter which I quoted, the solution must come from within the industry. It must come from knowledge and from its intensive and organised application.

Wales is a little country full of possibilities, rich in its natural endowment, with a well-disposed people and a real atmosphere. I cannot help comparing Wales with two other little European countries that I know well. Denmark is one. Here is a country with soil and climate not very unlike those of Britain. Under an entire misconception, Denmark at one time was attempting to be a wheat-producing country, when it suddenly concluded that it was intended by nature to be devoted to animal husbandry. So just over 50 years ago it changed completely over with the result that to-day one-third of the population live directly on agriculture and another third on the concerns accessory to it. It was my privilege to be present in Copenhagen last year as a guest invited to join with them in commemorating what they with joy designated their great revival!

The other country is little Switzerland, in education an object lession to the whole world. There is in many ways a great similarity between Switzerland and Wales. But the natural conditions there render the conduct of agriculture more difficult. Switzerland was once referred to as untillable rock. So intelligently have the Swiss devoted themselves to its development that Switzerland has been referred to as the richest country in the world per head of its population. What do we find? In five of her Universities there are complete Faculties devoting themselves to medical science. The Universities of Berne and Zurich have complete Faculties devoted to the animal industry. The University of Berne was the first in the world to institute a complete Faculty in Veterinary Science with Animal Husbandry. By one stroke this University placed this division of learning on a plane of absolute equality with Arts, Pure Science, Law and Medicine. By this act it signified that it formulated the highest possible conception of the magnitude and importance of the animal industry. There is a Faculty with its full complement of departments and professorships enjoying the absolute confidence of the University and the fullest liberties and privileges to bring about its own evolution. Some years ago I was present at their invitation when they were commemorating the twenty-fifth anniversary of its foundation—of what they regarded with pride as the greatest epoch-marking event in the history of veterinary education. It gave them their opportunity. On two occasions since, a member of this Faculty has been called upon to fill as Rector the highest position the University could offer.

Centres in other parts of the world where there are no obstacles, in the way of vested interests, are endeavouring to follow the example set by Berne.

To continue our story of the Welsh sheep. A Faculty of Veterinary Science with animal husbandry in its broadest sense, as distinct from animal management and hygiene, would take under its purview the whole history of the sheep, its birth, growth and development, its protection against disease or the cure of its disease, the use of its products and by-products, during life and after death, the charge of all the end products, of food or other usable material to the actual consumer or user.

A Faculty would consist of the necessary number of departments, each dealing with a part of the problem, but all inter-related and together representing an organic unit of study.

Properly organised and constituted, with the strictest regard for our definition and all that it implies, a Faculty would provide that co-ordinating machine which as I have pointed out is now lacking and the lack of which is our failure.

What I have said of the sheep will apply to the other domestic species.

We must produce, we must sell, we must consume and use. Failure of one of those means failure of all. It would be the function of the Faculty to apply knowledge to their co-ordination for the public welfare.

During the Great War Earl Selborne appointed a Committee to ascertain what we were paying to other countries for commodities which we could produce for ourselves. The sum was two hundred million pounds a year, and the bulk of it represented commodities derived from domestic animals. The figure has greatly increased since.

The capital value of our productive machine is 400 to 450 million pounds. We must add the enormous sum representing the value of our thoroughbred equine stock and the smaller domestic animals. Our loss from disease approximates 20 million pounds a year.

I have already mentioned the enormous losses through avoidable leakages, and the unestimated loss through unemployment in the countryside. Added to these is the neglect to make a proper contribution to a more even distribution of our people and the relief of the appalling congestion in some parts with its recognised attendant evils. Would five million pounds as a capital sum for establishment and endowment be regarded as an unreasonable

amount to foster some really comprehensive constructive effort towards a solution? A business man to-day would surely say we had under-estimated the need. It would prove one of the nation's most profitable investments. We gave ten millions to the coal industry as a temporary expedient—we are handing out millions in subsidies and bonuses of all kinds.

The British University that is prepared to take the broad view and confer upon this science and its representatives the opportunity afforded by a Faculty, with its members enjoying that security and freedom as are conferred upon those working in other divisions of learning, will bring to the animal industry benefits, the value of which it would be difficult to estimate.

Here is an opportunity for the University of Wales to help—working not in antagonism but in harmony with Liverpool, its neighbour, and with the parental blessing and guidance of the governing Council of the profession, which I have always found ready and anxious to give freely of its collective wisdom and experience in the advancement of its science. The University of Wales can become another Berne and provide a similar inspiration to those who are gravely concerned to-day in attempting to deal with this problem, that has such an enormous bearing on our greatest domestic question—the cost of living.

ROYAL SANITARY INSTITUTE CONGRESS

The preliminary programme of the Health Congress, which is to be held at Scarborough this year from July 3rd to 8th, has been issued by the Royal Sanitary Institute. The Right Hon. the Earl of Harewood, K.G., G.C.V.O., is the President of the Congress.

The officers of Section D (Veterinary Hygiene) are as follows: *President*—Colonel Sir Arthur Olver, C.B., C.M.G., F.R.C.V.S., Principal, Royal (Dick) Veterinary College, Edinburgh; *Recording Secretary*—Lieut.-Colonel J. A. Dixon, T.D., M.R.C.V.S., Chief Veterinary Officer, Leeds; and *Local Secretary*—H. W. Good, Esq., M.R.C.V.S., Veterinary Surgeon to the Scarborough Corporation.

On Thursday, July 6th, the President of the Section will give his address, and the following subjects will be discussed: (1) "The Position of the Veterinary Surgeon in the Larger English Meat Factories," and (2) "Tuberculosis and other important diseases of Fowls."

The Section will meet again on the morning of the following day, for a discussion on "Practical Methods in Clean Milk Production."

the entry of their Branch into the life of the Association. Though such a fortification of Welsh fervour may be deemed superfluous we would venture to express our conviction that the purposes which the Branch was promoted to serve will be fully achieved and that the new President's wish that the National Veterinary Medical Association should meet in South Wales will be fulfilled at a not very distant date.

The Veterinary Record

April 8th, 1939.

The Welsh Branch of the N.V.M.A.

AN impressive beginning of its career as a fully functioning constituent of the National Veterinary Medical Association was made by the Welsh Branch on March 17th at Cardiff. As recorded elsewhere in this issue, the meeting was held in the magnificent Civic Buildings of the City under the auspices of the Lord Mayor and other dignitaries representative of the corporate and scientific life of Wales. An enthusiastic assembly thus witnessed the gratifying outcome of the decision to form such a unit, taken by the North and South Wales Divisions at Shrewsbury in November, 1937, when the Branch was inaugurated.

The National Veterinary Medical Association shares to the full the high appreciation of the work of the profession in the Principality so well expressed by Alderman Gough Howell, who also emphasised the peculiar application of such work to a country such as Wales, in which agriculture is of special importance. In associating our congratulations with those of the Lord Mayor on the formation of this important addition to professional organisation, we have particularly in mind the activities of its long-established and active forerunner in Scotland, testimony which clearly shows that a virile Branch can, while making its special contribution to the solution of local problems, strengthen the hands of the parent body in its task of furthering the aims of the profession as a whole.

It was most fitting that the first President, Professor Share Jones, should present the initial paper to the Branch and that he should choose such an appropriate subject as "Wales and the Animal Industry." All will wish to read that forceful and comprehensive contribution, reproduced herein, and, having done so, will regret the more the indisposition of its author which precluded what doubtless would otherwise have been an animated discussion and compelled an immediate return to the bed which he left to present it.

To Professor Share Jones, to the new President, Mr. Campbell Hill, the Secretary, Mr. Anthony, and their colleagues, we extend our felicitations on the success of the ceremony and

(*Continued at foot of previous column*)

CLINICAL COMMUNICATION

Intussusception of the Caecum of a Puppy

CHARLES WEIGHTON, M.R.C.V.S.
Lincoln

Subject.—A Staffordshire bull-terrier male puppy, born June 20th, 1938.

History.—The pup had lost flesh rapidly during the two weeks prior to examination. It had been eating ravenously but was frequently sick soon after taking food. The pup had previously received worm treatment, and was immunised against distemper in September (vaccine-virus: Laidlaw and Dunkin). Bowel movements had been regular, the faeces being of soft consistency.

Examination.—The puppy was first examined on November 18th, 1938, when it was found to be only in fair condition.

On palpation of the abdomen an object about the size of a pigeon's egg could be felt and a foreign body was suspected in the intestine. This was thought to be a piece of india-rubber. The animal's temperature was normal, there was no evidence of pain, and he was normal in every other way. The owner was advised to give liquid paraffin at frequent intervals but there was no alteration in the condition of the puppy either on November 19th, 20th, 21st or 24th. On November 21st a medical colleague kindly made an X-ray examination and confirmed the view that there was a piece of india-rubber in the intestine. Occasional enemata were given from time to time, but without effect. Treatment was continued—the feeding of suet pudding being suggested—until November 25th.

Operation.—On November 25th the animal was narcotised by a subcutaneous injection (morphine ¼ grain, atropine 1/200 grain). About ten minutes after the injection the puppy was sick and passed blood-stained liquid faeces. General anaesthesia was produced using equal parts of chloroform and ether administered by Professor J. G. Wright's apparatus. Anaesthesia was very satisfactory.

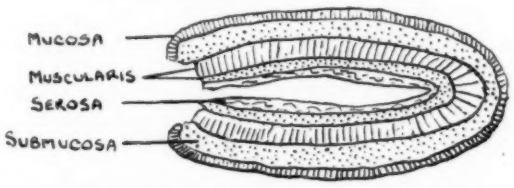
A median incision was made. On the bowel being exposed, an attempt was made to move the enlargement, without success. The bowel was then opened at the commencement of the colon posterior to the enlargement with the object of extracting the foreign body by forceps. This being impossible, the bowel was incised immediately over the object. To my surprise I found what appeared to be a tumour about 2 in. long and 1 in. in diameter projecting posteriorly into the colon with its base adjacent to the ileo-caecal valve. The object was ligatured by two separate strands of catgut as close to the base as possible and removed by a transverse incision. There was only slight haemorrhage so nothing more was done and the bowel incisions were sutured by catgut. Two rows of catgut ligatures were used for the abdominal muscles and silk for the skin wound.

I am indebted to Messrs. A. A. B. Ellis and E. G. White, of the Royal Veterinary College, London, for the following report and diagram, and particularly to Mr. White for his thorough discussion of the case.

Pathological Report

The specimen was the size and shape of man's thumb; it was dark-red in colour and at one end was a small orifice admitting a probe which could be passed almost to the distal rounded end. The specimen was almost entirely covered by mucous membrane except for small areas, particularly near the rounded end, where ulceration had occurred. The structure of the mass was well shown by making a longtitudinal section. The outer covering of mucous membrane was of the type found in the large intestine and some areas of it showed acute inflammation with necrosis and leucocytic infiltration. The underlying sub-mucosa was about twice the normal thickness, the blood vessels were engorged and red blood corpuscles were found free within the connective tissue spaces. The muscular coats, circular and longtitudinal, formed the central part of the mass and were normal. The relation of the various layers is shown in the accompanying diagram.

Diagram of Specimen—Natural Size



Invagination of the apex of the caecum and the further passage of the apex into the colon has been recorded in the horse and in birds. We have recently seen a cases in the horse in which the whole of the caecum was invaginated into the large colon. In the dog the condition is probably extremely rare and it is of interest that it may cause symptoms similar to those produced by a foreign body.

Weight Record

I have to thank the owner for the record of weights, as follows:—

Date	*Weight*
29.8.38	11 lb. 8 oz.
7.9.38	12 lb. 12 oz.

Date	*Weight*
22.9.38	15 lb. 12 oz.
14.10.38	16 lb. 7 oz.
17.10.38	19 lb. 10 oz.
16.11.38	21 lb. 12 oz.
23.11.38	22 lb.
Date of operation—November 25th	
5.12.38	20 lb. 14 oz.
8.12.38	21 lb. 8 oz.
17.12.38	23 lb. 4 oz.
22.12.38	26 lb.
4.1.39	26 lb. 12 oz.
14.1.39	29 lb. 2 oz.
18.1.39	30 lb.

COURSE

The temperature of the puppy was normal on November 26th, and he appeared to have no discomfort and was given liquid nourishment during the day.

November 27th.—Condition as on the previous day. Morning temperature 103·3°. Evening temperature 102·8°.

November 28th.—Morning temperature 102·4°. Evening temperature 101·7°. Three of the skin sutures were removed on this date.

November 29th and *30th.*—Progress maintained. The remaining sutures were removed on the latter date.

December 1st.—The puppy continued to do well. He had commenced taking liquid nourishment less than 24 hours after the operation; the diet was gradually increased and a small amount of solid food was taken from November 28th onwards without sickness.

December 2nd.—The puppy was discharged after having made a rapid and satisfactory recovery.

WORLD'S POULTRY CONGRESS

More than 60 countries will be represented at the seventh World's Poultry Congress, to be held at Cleveland, Ohio, from July 28th to August 7th. The official delegation from this country will be headed by Sir Edward Brown, who will speak at the opening of the Congress.

Special travel arrangements have been made by the British Committee for the convenience of those wishing to attend the Congress. Particulars may be obtained from Major Ian Macdougall, Secretary of the Committee, 73, Southampton Row, London, W.C.1.

* * * * *

The National Stud, established in 1916 at Tully, County Kildare, made a profit in 1937 of £10,248, compared with £6,058 in 1936, it was revealed in the trading accounts and balance sheets for 1937. The profit "was the outcome of better prices prevailing at the bloodstock sales." Twelve horses sold averaged £1,740, compared with averages of £1,684 for nine horses in 1936, £1,324 for 15 horses in 1935, and £954 for 15 horses in 1934.

ABSTRACTS

[The Campaign Against Bovine Tuberculosis. (Trans. title.) FERAUGE, A. (1938.) *Ann. Med. vét.* **83.** 1. 17-33.]

In Belgium 65 per cent. of farms and 25 per cent. of cattle are affected with tuberculosis. In the south of Luxembourg the incidence is about 75 per cent. of farms and 10 per cent. of cattle. A possible explanation of this difference is that in some areas very few animals are brought into the district. In places, where many purchases are made and where cows are kept until they are old, the incidence of tuberculosis is very high. Other factors in the spread of the disease are the purchase of heavy milking cows, the importation of cattle which are less resistant than native cattle and increase in the number of animals kept in one herd. The importance of good feeding and housing is mentioned, but the author points out the futility of putting infected cattle in good buildings. He gives a review of the laws passed since 1892 for the control of tuberculosis in cattle. These provided for tuberculin testing, slaughtering of reactors, notification of clinical cases and cases found at autopsies, isolation of in-contact animals and compensation for slaughter. In 1926 new laws were enacted arranging for wide tuberculin testing and clinical examination, slaughter of reactors in slightly infected places, the carrying out of Bang's method of eradication in more affected districts and of Ostertag's method in heavily infected districts. Cases of tuberculosis in calves and pigs must be notified and the source of infection traced. Owners are encouraged to improve feeding and housing. The author advocates close co-operation of the veterinary surgeons with owners, who should be given advice constantly; he is also strongly in favour of the formation of anti-tuberculosis associations by intelligent and progressive owners.

C. McG.

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[Immunisation Against Foot-and-Mouth Disease in Cattle with Passaged Virus. (Trans. title.) FRENKEL and VAN WAVEREN. (1938.) *Tijdschr. Diergeneesk.* **65.** 6. 264-281.]

Active immunity was conferred upon 1,500 cattle by the simultaneous inoculation of cultured foot-and-mouth disease virus (fourth passage) into the mucous membrane of the tongue, and convalescent serum (100 to 600 c.c. according to weight). The disease produced by this vaccination was of a mild type; secondary lesions in the feet were prevented by careful hygienic measures including painting the claws with 10 per cent. tinct. iod. twice daily.

In a second experiment the culture virus was inoculated in dilutions of 0·2 c.c. to 0·02 c.c. in 1 : 10 to 1 : 10,000 without the use of serum. At present 220 cattle have been inoculated; a very mild type of the disease was observed in all cases. E. C. H.

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[Duration of Immunity Following Goat-Virus Vaccination in Cattle. NAIK, R. N. (1938.) *Indian J. Vet. Sci. and Anim. Husb.* **8.** 2. 103-112.]

This article records the testing, with cattle virus, of the immunity of two cattle and two buffaloes immunised against rinderpest, five years previously, by vaccination with goat-blood virus. The four animals resisted the virus inoculation without any recognisable reaction whereas two controls suffered severe temperature reactions complicated by piroplasmal infections. The article is not entirely conclusive as no evidence is produced that the immunity of the vaccinated animals had not been enhanced by exposure to rinderpest during the five years between vaccination and testing.

U. F. R.

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[Further Investigations on the Use of an Intradermal Test for Swine Fever. (Trans. title.) DONATIEN, A., and LESTOQUARD, F. (1938.) *Bull. Acad. vét. France.* **11.** 5. 308.]

The results are given of further investigations into the use of an intradermal test in the diagnosis of swine fever. The test is performed by the introduction into the skin of 0·5 c.c. of a mixture of castor oil and virulent citrated or defibrinated blood. A positive reaction is indicated by the development of an oedematous, erythematous swelling at the twenty-fourth hour. This reaction is obtained with a bacteria-free antigen or with one contaminated with *B. suipestifer*, streptococci, etc.; no reaction is recorded in cases of influenza, erysipelas and other conditions. The test may be used as a means of estimating the antigenic value of different strains of swine fever viruses and also the potency of therapeutic sera.

E. C. H.

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[Treatment of Infectious Sinusitis of Turkeys with Argyrol and Silver Nitrate. DICKINSON, E. M., and HINSHAW, W. R. (1938.) *J. Amer. Vet. Med. Assoc.* **93.** 3. 151-156. (5 refs., 1 table.)]

This paper is based on the results of a series of field trials of 15 per cent. aqueous solution of argyrol and 4 per cent. aqueous solution of silver nitrate (*both freshly prepared*) as curative agents in the treatment of infectious sinusitis of turkeys. The name is given to the condition to differentiate it from fowl coryza and A-avitaminosis.

The disease is characterised by a turbid, mucoid exudate which distends one or both infraorbital sinuses, with a resulting nasal discharge. Although the death-rate is low the disease spreads quickly, causing severe financial losses to owners. It is thought that chicks are not susceptible.

A detailed description of the treatment is given, which consists in the aspiration of the exudate from the sinus and the injection of 1 c.c. of either of the therapeutic agents mentioned into each sinus, although one only may be distended. If recovery does not take place in ten to 14 days, the treatment is repeated. Over 1,000 birds were treated in the field trials. It is impossible to state the actual percentage of cures effected as some birds were sold and escaped or lost their bands. The treatment is said to be very successful and is evidently more effective in the early stages of the disease.

Slightly better results were noted with silver nitrate than with argyrol, but the former "has the disadvantage of having a corrosive effect on both the instruments and the operator."

P. E. M.

WINTER CENSUS OF LIVESTOCK

The results of the winter census of livestock just published by the Ministry of Agriculture and Fisheries show increases, taking the United Kingdom as a whole, in all classes of stock compared with the previous year. The estimates are based on information collected on December 4th by the Ministry and the Department of Agriculture for Scotland, and on January 1st by the Ministry of Agriculture for Northern Ireland; in combining the figures it has been assumed that no alteration occurred during December in the Northern Ireland figures.

Cattle in the United Kingdom in December, 1938, are estimated to total 8,902,000 head, compared with 8,696,000 head in 1937. This increase, which on this occasion has taken place in all classes of cattle, has been in evidence each year since 1935, when this series of winter censuses commenced.

The United Kingdom sheep population is estimated at 20,805,000, compared with 20,144,000 in 1937—an increase for the third year in succession. Ewes kept for breeding, rams and ram lambs, and other sheep of one year old and over, have all increased in number; but, compared with the previous year, a substantial decrease is recorded in the numbers of other sheep under one year old.

Although the total number of pigs in December, 1938, is slightly above the 1937 figure —4,700,000 compared with 4,697,000—it is still below the winter population of 4,873,000 recorded in both 1935 and 1936.

The number of fowls in the United Kingdom in December, 1938, is estimated to be 47,444,000, compared with 46,942,000 at the corresponding date in 1937 when winter figures for fowls were first collected. It should be noted that all these estimates relate to agricultural holdings of over one acre in extent, and that in the aggregate large numbers of fowls—and smaller numbers of other classes of livestock—are not included because they are kept on smaller plots of land.

REPORT

[Assam: Report of the Civil Veterinary Department for the Year 1937-38 (Ghose, S.) (Assam Government Press, Shillong; annas 9, or 10d.)]

The staff consisted of one superintendent, one veterinary investigation officer, five veterinary inspectors (one temporary), 61 veterinary assistant surgeons and two temporary veterinary assistant surgeons. The staff is admitted by the Government to be inadequate and proposals for the reorganisation of the Department are under review. In the meantime, in view of the persistent and urgent demand from the public the Government have approved a scheme for the provision of 43 field veterinary assistants to implement the work of the veterinary assistant surgeons. The qualifications of the field veterinary assistants are not stated. The Government have also, in order to allay discontent in the tea gardens, approved a scheme for the training of 115 assistant medical officers of the tea estates in the method of preventive inoculation against rinderpest. The arrangement is not regarded as satisfactory, but it is hoped that with the co-operation of the tea industry the scheme will help to solve the difficulty of dealing with epidemics.

The year was unhealthy for livestock, rinderpest being responsible for heavy mortality. The goat-tissue vaccine method of protection against rinderpest has gained ground and success is reported to have been very striking. With strict control it proved possible to lower the incidence of Johne's disease on the Government farms, but control is difficult to bring about in rural areas. There were no deaths from glanders during the year and the mortality from *surra* was much reduced.

The work of the veterinary investigation officer covered a wide field and his term of office has been extended. A detailed report of this officer's work has been submitted to the Agricultural Research Council.

The number of cases treated on tour by the itinerating staff and at the veterinary hospitals continued to increase and the activities of the Department show development in many directions, there being an all-round increase in the volume of work. The report is an interesting one and a good case is made out for a considerable increase of staff.

G. K. W.

Confidence in the future of the breed is expressed in the annual report of the Red Poll Cattle Society, which states that there are signs of brighter times for dual-purpose cattle. The extent to which Red Poll bulls have been used for cross-breeding in herds of pure dairy cattle is a good omen, it is stated.

N.V.M.A. BRANCH REPORT

Welsh Branch

MEETING AND LUNCHEON AT CARDIFF*

The first meeting of the Welsh Branch of the N.V.M.A. was held at Cardiff, in what have been described as the finest Civic Buildings outside Vienna, on Friday, March 17th, 1939, under the Presidency of Emeritus Professor Share Jones, M.D. (V., *h.c.*), D.V.Sc., M.Sc., F.R.C.V.S., and the Branch received an enthusiastic send-off on its infant career from the Chief Citizen of the Chief City of Wales, and from the eminent gentlemen assembled at the luncheon.

A short Council meeting was held at 12.30 p.m., when the Hon. Secretary reported on some matters outstanding from the Shrewsbury meeting. After this the members and visitors assembled at the Banqueting Hall in the beautiful City Hall, where the Lord Mayor and Corporation of Cardiff extended a civic welcome to the Welsh Branch.

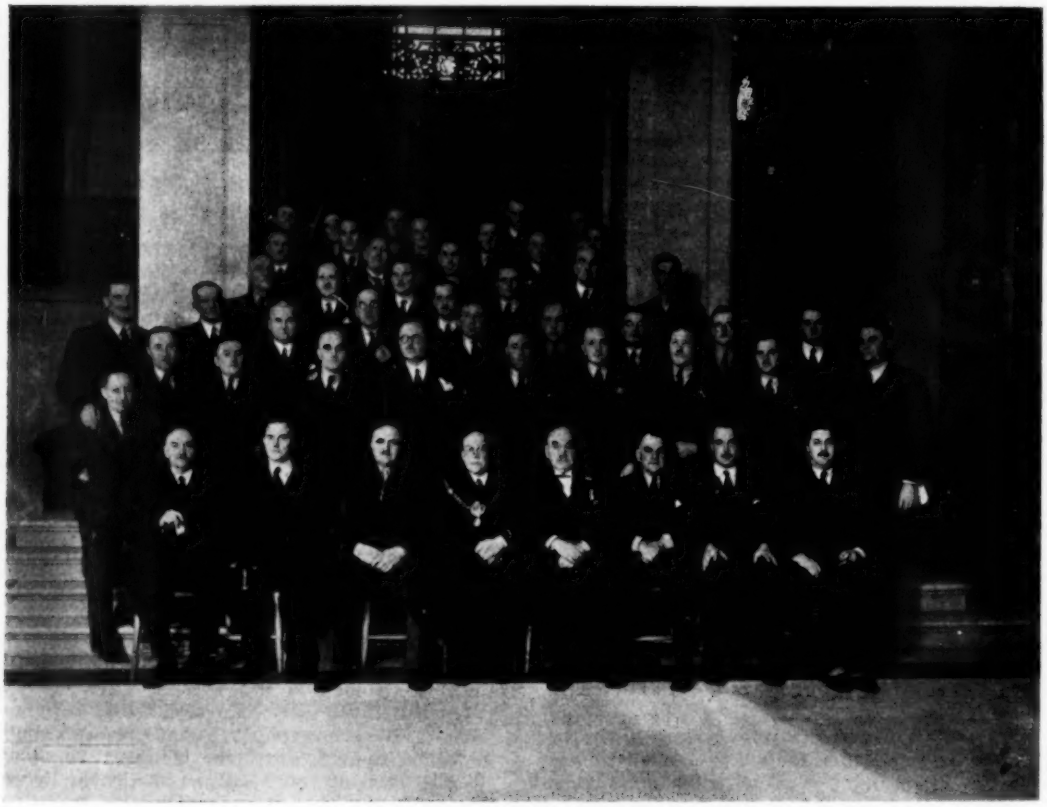
The Luncheon

Unfortunately, owing to illness, the President, Professor Share Jones, was unable to attend the luncheon, and his place was taken by the President-Elect, Mr. Campbell Hill, M.R.C.V.S. When the newspaper photographers had obtained their "copy," the company sat down to an excellent luncheon, presided over by the Lord Mayor (Ald. Gough Howell), supported by members of the Cardiff Corporation and representatives of various departments of Welsh life, music being provided by a local orchestra.

After honouring the loyal toast, the toast of the visitors was proposed by the Lord Mayor, who expressed the regret of all present at the inability of Professor Share Jones to be present at the luncheon. The Lord Mayor then said: "In connection with the Veterinary Medical Association, Wales has recently been created a separate branch. Professor Share Jones's term of office as President expires to-day, and Mr. Campbell Hill, of Llanelly, will be the new President. The inauguration of the Welsh Branch is regarded as an important event in the history of local government in Wales, and it therefore gives great pleasure to the City Council to invite members to luncheon and to give them the opportunity of holding their meetings in the City Hall.

"As a body, the Association is representative of a profession the work of which has peculiar application to the Principality of Wales, where agriculture is of special importance. I am glad to be associated with a body whose objects are

*Received for publication March 25th, 1939.



WELSH BRANCH, N.V.M.A.: FIRST MEETING, AT CARDIFF

FIRST ROW (*sitting, left to right*).—J. Stanley Pike, Esq., Swansea, Past-President, South Wales Division, N.V.M.A.; Dr. W. R. Wooldridge, Hon. Secretary, N.V.M.A.; Professor Share Jones, President, Welsh Branch, N.V.M.A.; W. G. Howell, Esq., Lord Mayor of Cardiff; J. Campbell Hill, Esq., Llanelly, President-Elect, 1939-40, Welsh Branch; H. Llewelyn Jones, Esq., Denbigh, President, North Wales Division, N.V.M.A.; A. D. J. Brennan, Esq., President, South Wales Division, N.V.M.A.; Captain W. G. Wragg, Chief Superintending Inspector, Ministry of Agriculture and Fisheries.

[Copies of the above photograph, price 5s. each, may be obtained from Messrs. H. J. Whitlock & Sons, Ltd., Duke Street Arcade, Cardiff, or through the Hon. Secretary of the Welsh Branch, N.V.M.A., Mr. D. J. Anthony, Linley Moor, Bell Street, Brierley Hill, Staffs.]

to furnish adequate treatment for animals. I feel that human beings are the trustees of the well-being of animals, and any man who is helpful or considerate to animals is a friend of mine, and of every healthy-minded person.

"We envy our guests to-day for their work in alleviating suffering amongst animals, and we think they are doing extraordinary good work. There are, of course, societies like the R.S.P.C.A., but there is in Wales a great deal of work to be done against diseases of which animals suffer, and to try to eradicate suffering and disease. We congratulate the members of this noble profession upon having formed a Branch in Wales."

In responding, Mr. CAMPBELL HILL, President-Elect, who was deputising for Professor Share Jones, after expressing thanks to the Lord Mayor and the hosts for the day, and his regret that Professor Share Jones with his Celtic eloquence was not present, said: "We have tried to build up a profession comparable to any in any other country. We have never received from the Government or other bodies any funds to enable us to do the work we ought to and could do. Now, for the first time in our history we have Government funds placed at our disposal and we have set out on the vital and important task of preventing disease before it actually starts. We are looking forward to a great deal of success, but we must have the active support and co-operation of local authorities to enable us to eradicate diseases in animals. I am afraid the large body

of public opinion has but a hazy conception of just what veterinary work is, and what it can accomplish: animal husbandry is so large a subject. I hope that to-day's meeting is the beginning of great things, and that eventually the National Association will come and pay South Wales a visit."

Supporting the Lord Mayor were Professor A. W. Sheen, Dean of the Welsh National School of Medicine; Mr. W. Hugh Jones, K.C. (Stipendiary Magistrate for Cardiff); as well as the heads of various Civic Departments. Members of Council of the Welsh Branch, including Mr. J. Campbell Hill, President-Elect; Mr. J. F. Rees, Carmarthen; Ald. W. M. Thomas, Wrexham; Messrs. W. D. John, Ammanford; D. E. Pugh, Swansea; Howel V. Hughes, Deputy-Director of Veterinary Studies, Liverpool University; H. Llewelyn Jones, Denbigh, President of the North Wales Division; A. D. J. Brennan, Carmarthen, President of the South Wales Division; J. S. Pike, Swansea, Past-President, South Wales Division; Captain W. G. Wragg and Dr. W. R. Wooldridge, representing the parent body, the N.V.M.A.; and Mr. D. J. Anthony, the Hon. Secretary of the Branch.

Following the luncheon, a group photograph of some of the members was taken, at which Professor Share Jones was present, having travelled from a sick bed, in order to avoid "letting the Branch down," and to read his paper at the afternoon meeting. Whilst the photograph was being taken, other members visited the various civic and national buildings adjoining.

The Business Meeting

After a short interval, the business meeting of the Branch was held in the Council Chamber at the City Hall, Professor Share Jones, the President, being in the Chair. The following members and visitors were also present: Messrs. J. Campbell Hill, Llanelly; D. J. Anthony; W. D. Williams, Caerphilly; W. D. John, Ammanford; J. F. Rees, Carmarthen; J. Stanley Pike, Swansea; D. Scott Weir, Aberdare; W. E. Williams, Rhondda; R. Moore, Treorchy; Brin Sayer, Newport; Reg. Hall, Barry; A. D. J. Brennan, Carmarthen; T. H. Jones, Llandilo; D. E. Pugh, Swansea; J. A. Milton, Pencoed; D. E. Davies, Neath; A. F. Good, Aberdare; J. Howard Jones, Glamorgan; S. J. Cotton, Usk; S. Ll. Trevor, Chepstow; John Evans, Llanelly; T. Idwal Thomas (R.V.C.); H. William Smith (R.V.C.); W. George Davies (R.V.C.); G. Thos. Cattell, Carmarthen; J. R. Barker, Hereford; G. H. Thomas, Anglesey; W. D. Rees, Penygraig; H. Llewelyn Jones, Denbigh; J. A. H. Stewart, Cardiff; J. H. M. Hughes, Cardiff; J. L. Perry, Cardiff; C. J. Pugh, Newport; T. Roger Thomas, Carmarthen; J. W. Simpson; H. M. Duff; R. McNeil; D. H. Thomas; A. Houston and M. Jones; together with Captain W. G. Wragg, Ministry of Agriculture; Howel V. Hughes, Liverpool University; and Dr. W. R. Wooldridge (London).

Apologies for inability to be present were received from: Mr. G. H. Livesey, President, R.C.V.S.; Dr. Fred Bullock, Secretary and Registrar, R.C.V.S.; Messrs. E. P. Edwards, Bournemouth; H. W. Cartwright, Dyserth; J. Richards, Caernarvon; H. Jones Roberts, Pwllheli; Major Brennan DeVine (President, N.V.M.A.); Messrs. F. Knight (Secretary, N.V.M.A.); W. Brown (*Veterinary Record*); H. E. Bywater (Hon. Treasurer, N.V.M.A.); Henry Davies, Manchester; D. Gladstone Davies, Swansea; Captain J. R. Rider; Dr. J. F. Rees, Principal, University College, Cardiff; Captain Donald Campbell; Lieut.-Colonel P. J. Simpson, D.S.O.; Sir Frederick Hobday, C.M.G.; Major-General W. S. Anthony, C.B., C.M.G.; Dr. J. T. Edwards; Mr. S. J. Edwards, B.Sc.; Professor J. F. Craig, M.A.; Rt. Hon. D. Lloyd George, O.M., M.P.; Captain Ernest Evans, M.P., University of Wales; Miss Megan Lloyd George, M.P.; Major Goronwy Owen, M.P.; Robert Richards, Esq., M.P.; Sir John Morris Jones, M.P.; Gwilym Rowlands, Esq., M.P.; Emlyn Jones, Esq., Cardiff; Dr. Arnold McNair, C.B.E., Vice-Chancellor, University of Liverpool; Stanley Dumbell, Esq., Registrar, University of Liverpool; Professor Henry Cohen, M.D., University of Liverpool; Sir John Rowlands, Cardiff; P. R. Laird, Esq., C.B., Secretary to Department of Agriculture for Scotland, Edinburgh; Emrys Williams, Esq., President of Association of Welsh Local Authorities, Wrexham; J. B. Pitchford, Esq., Newport; Ald. Tom Wise, Bristol; Lord Davies, Llandinam; Edward Carey, Esq., LL.B., Rhos-on-Sea; Lawson Taylor, Esq., Secretary, Association of Welsh Local Authorities, Wrexham; and Sir Hayden Jones, M.P., Merioneth.

Presidential Address.—Owing to the indisposition of the President, it was decided to request him to deliver his address first, in order that he might return home as soon as possible.

Professor Share Jones's paper, entitled "Wales and the Animal Industry" was heard with great interest and appreciation. [The paper is reproduced at the commencement of this issue of the *Record.—Editor.*]

A vote of thanks to the President was proposed by Mr. J. Campbell Hill, President-Elect, and seconded by Mr. Llewelyn Jones, President of the North Wales Division.

Induction of President.—The President then vacated the Chair and invested Mr. Campbell Hill as President for 1939-40. Professor Share Jones then had to leave immediately for home, to the regret of the members.

The minutes having been signed, the business meeting then proceeded. It was decided to leave the provision of post-graduate courses, or refresher courses in such matters as *post-mortem* technique, poultry diseases, etc., to the respective Divisions, as they already had them under consideration.

Proposed Memorial to Dr. Griffith Evans.—The question of a memorial for the late Dr. Griffith Evans was raised at the request of the North Wales Division, and the President and Mr. Howel Hughes both gave a short summary of some reasons why it was felt that a memorial ought to be raised to that great Welsh pioneer. As was explained by Mr. Howel Hughes, Secretary to the North Wales Division, his Division had already considered the matter and decided in favour of a memorial. They had approached the N.V.M.A. Council on the matter, but had received no support from that body. Eventually, after some further enlightenment, it was decided to refer the matter to the South Wales Division for consideration, so that they could report back in due course to the Branch, when the Branch would then decide as to what action to take.

Representatives to Council, N.V.M.A.—The President and Hon. Secretary were nominated to represent the Branch on the Council of the N.V.M.A., and it was suggested that the two representatives should if possible serve on the Parliamentary and Veterinary Officers' and Public Health Committees. In making this recommendation, Mr. Llewelyn Jones, President of the North Wales Division, expressed the hope that the Branch would be virile and active, and not a dead-letter Branch, as Wales needed a square deal, having been somewhat pushed aside in the past.

Next Meeting.—It was decided that the Branch hold one good meeting each year, so as not to clash with Divisional meetings, and that the next meeting be held early in June, 1940, at Llandrindod Wells.

Felicitations from the Parent Body.—Dr. W. R. Wooldridge brought the good wishes of the President of the N.V.M.A. to the new Branch, and expressed the hope that the Branch would be a "live" one. Felicitations were also expressed by Captain J. R. Barker on behalf of the parent body.

Votes of Thanks.—It was proposed by the President and seconded by Mr. W. D. John that a hearty vote of thanks be accorded to the Lord Mayor and Corporation of Cardiff for their entertainment of the Branch to luncheon, the civic welcome, and for the use of the Council Chamber.

A vote of thanks to Mr. Campbell Hill, the President, terminated a very successful first meeting.

D. J. Anthony, *Hon. Secretary.*

N.V.M.A. DIVISIONAL REPORTS

Lancashire Veterinary Association*

MEETING AT MANCHESTER

Discussion on Abnormal Conditions Attending Parturition in the Cow

A general meeting of the Association was held at the Grand Hotel, Aytoun Street, Manchester on Wednesday, November 9th, 1938, at 2.30 p.m.

The President, Mr. G. Mayall, M.R.C.V.S., occupied the Chair, and there were also present: Messrs. G. C. Webster, R. N. Clunie, C. F. Shawcross, H. Holroyd, J. Adamson, Jun., R. B. Hornby, H. H. Aldred, J. McGhee, J. H. Wright, W. Walker, R. H. Oddy, W. Woods, C. T. Trevers, R. C. Locke, A. J. Wright, Mrs. K. G. R. Kelly, Miss H. Patchett and Miss P. Stubbs. Mr. N. Craig was present as a visitor.

Apologies for non-attendance were received from Messrs. A. L. F. Mullen, H. Sumner, O. Mitchell, Sir F. T. Hobday. Messrs. A. B. Mattinson, H. R. Hewetson, P. T. Lindsay, J. Lyon, J. Holroyd, R. L. Greenhalgh, G. H. Locke and J. Spruell.

The minutes of the last general meeting, having been published in the *Veterinary Record*, were taken as read.

Correspondence.—Letters were read from:—

(*a*) Messrs. T. J. Smith & Nephew, Ltd., offering to show the film "Treatment of Bone Fractures in the Dog and Cat" to the Association on December 13th, this date having been reserved tentatively, pending the decision of the general meeting.

It was considered desirable that the film should be shown to the Association, but the above date was not suitable. The Secretary was instructed to write and enquire whether it could be shown in January and to arrange it for the annual general meeting in Liverpool.

(*b*) Captain J. R. Barker, offering a supply of reprints of the paper "Blood Plasma Changes and Variations in the Female Bovine Toxaemias."

The Hon. Secretary had accepted Captain Barker's offer and had thanked him on behalf of the Association.

(*c*) Mr. J. O. Powley, indicating that he had reconsidered the resignation which he had previously submitted, but had decided to resign owing to a change of locality.

It was proposed and seconded that the resignation be accepted with regret.

*Received for publication February 3rd, 1939.

(*d*) Mr. G. C. Webster, thanking the Association for the wishes conveyed to him in his recent illness.

(*e*) Resignations were received from Messrs. H. T. Matthews, R. J. Thomas and G. Tullis, all of which were due to change of locality. The resignations were accepted with regret.

New Members.—Messrs. T. Hey, B.V.Sc., M.R.C.V.S., Leyland, and T. Scott Anderson, M.R.C.V.S., Altrincham, were duly elected members of the Association.

Report of Council.—A report of the proceedings of the Council on August 16th was read and adopted.

Some Clinical Observations on Abnormal Conditions met with prior to, during and after Parturition in the Cow

Mr. A. J. Wright (Macclesfield), responding to the invitation extended to him by the President to address the meeting on the above subject, said that it was one of so vast a range that he now regretted having undertaken its presentation. It covered most of the work which many of them engaged in cattle practice were called upon to perform, while it was a subject upon which there was little new information, nor had there been any marked modernisation of methods of treatment.

Mr. Wright then dealt in sequence with the cause, symptoms, prognosis and treatment of the following conditions:—

Pre-Parturition: . Hydrops amnii or hydramnios, *ante-partum* paralysis, *ante-partum* prolapse of the vagina.

Parturition: (*a*) Maternal Dystokia, due to (1) pelvic constriction, tumours and growths in the vagina; (2) hernia of the uterus; (3) uterine inertia; (4) torsion of the uterus; (5) rigidity or spasm of the cervix; (6) induration of the cervix; (7) abnormal placenta.

(*b*) Foetal Dystokia — malpresentations. (Use of the embryotome; Caesarean section; spinal anaesthesia.)

Post-Parturition (Diseases and Accidents): Retention of the foetal membranes, *post-partum* haemorrhage, inversion of the uterus, or the vagina and of the bladder; traumatic lesions of the genital organs (laceration of the uterus and of the vagina.)

Pathology of Parturition: Metritis, puerperal septicaemia, metroperitonitis, leucorrhoea, vaginitis, *post-partum* paraplegia.

The following are among the points made by Mr. Wright in the course of his observations on the foregoing conditions:—

(1) In cases of *ante-partum* paralysis, careful examination should be made *per rectum* to rule out the possibility of fracture or injury to the pelvis which, if present, can mislead one in diagnosis.

(2) After rectifying *ante-partum* prolapse of the vagina he preferred the use of West's vulval clamp to suturing, the clamp being left in position and the owner being instructed to remove it once parturition commences.

(3) In dealing with dystokia in the cow there were, in his opinion, two golden rules to observe: firstly, do not be in too much of a hurry (give both the mother and yourself time), and, secondly, use lubricants freely.

(4) Where there has been interference prior to one's arrival, by the owner or his "knowing neighbours," satisfy yourself that no damage has been done before delivery is attempted. If injury has been inflicted, point this out to the owner so that blame cannot be placed on your shoulders.

(5) In correcting uterine torsion, the "rolling" method is preferred to "vaginal taxis."

(6) In cases of malpresentation of the foetus, take time and endeavour to get a clear mental picture of its position. If attempts to correct the malpresentation fail, embryotomy is resorted to without undue delay: the difficulties of the case are greatly increased by the swollen and dry passages caused by long manual interference, whereas, in many cases, if embryotomy has been performed earlier, the task would have been much easier, the operator far less fatigued, and the risk to the mother reduced.

(7) In certain cases of dystokia he had found spinal anaesthesia very helpful, but he did not recommend its use in every case as when the malpresentation had been corrected, the mother could not facilitate the delivery by "paining."

(8) He favoured manual removal of retained membranes, doing so on the third or fourth day after calving unless they were putrid, when they were removed as soon as possible. He did not attach great importance to syphoning off the fluids afterwards. His method in every case was to inject a solution consisting of salt—½ to ½ lb.—and two tablespoonfuls of lysol in two gallons of water, slightly warmer than blood heat.

Recently a new form of treatment had been introduced into this country—the subcutaneous injection of a glandular product "Isovacuil." The injection was made at the forty-eighth hour after calving, and he understood from some of his colleagues that this method gave excellent results. Usually one injection sufficed, but if the placenta still remained, a second might be given in another forty-eight hours. He understood that Messrs. Willows & Co. were endeavouring to get this product—a French one—made in this country. He would be glad to hear the views of members who had used that agent.

Where metritis and septicaemia had set in, he used febrifuges, vegetable tonics combined with sodium hyposulphite, and latterly he had been administering prontosil, 2-drachm doses

orally twice daily, with excellent results. In conjunction, he employed the dead vaccine (Gamor Genatosan), which he believed to be of value in this condition.

(9) *Post-partum* haemorrhage had been dealt with successfully by the subcutaneous injection of pituitrin (10 c.c.) and packing the uterus with sheets steeped in cold water.

(10) In contradistinction to the position in mares, the prognosis in cases of inversion of the uterus of cattle was very good. Where there is not the means for raising the cow for reduction and repositioning of the organ, he used spinal anaesthesia — chlorocain, 10 c.c. — but where straining was very severe he combined elevation of the hindquarters with spinal anaesthesia.

General examination of the case should be made, as he had had numerous cases of haemorrhage into the uterus, death occurring very suddenly. The cow should be slaughtered as quickly as possible, cutting off the uterus being the best method of bleeding the carcase under such circumstances.

After reposition, a clamp should be applied or sutures inserted, removal taking place about the third day.

Amputation was indicated when the uterus was indurated and one was unable to effect reduction and reposition, or when the organ was badly lacerated or had become black, bruised or gangrenous (operation described). Another method is to cut the uterus away in portions, at intervals of a few days, after ligating. Both methods had yielded very disappointing results, most cases dying some twelve hours afterwards, seemingly from shock.

(11) *Post-partum* paralysis ("loin fallen") was a very troublesome and common condition, causing much anxiety to many practitioners, of the cause and pathology of which little was known. Cases occurring immediately after parturition were probably due to injuries inflicted on the sacral and other nerves during a difficult birth or prolonged arrest of the foetus in the passage. The symptoms were similar to those of *ante-partum* paralysis and the diagnosis was usually a simple matter, although one should be extremely careful to rule out the possibility of uncoupling or fracture of the pelvis or thigh bones. Prognosis usually was good, the animal often rising in two to three days, but in some cases there was recumbency for weeks, or they might never rise. Treatment consisted of counter-irritation to the spine, a smart purgative, and strychnine or camphor hypodermically—the latter in 20 c.c. doses had given very good results. Tonic powders containing nux vomica could also be given.

Discussion

Mr. C. F. Shawcross, opening the discussion, said he hoped he would not be regarded by the members present as one whom Mr. Wright in his modesty described as having forgotten more than he knew, but rather as one who, having had 30 years in the hard school of practical experience of parturition abnormalities, had still an open mind and much to learn.

As opener of the discussion, Mr. Shawcross continued, it was his privilege to be first to congratulate Mr. Wright on his comprehensive survey of a very wide and difficult subject.

He thought that we might safely assume that this class of work would not be included in any scheme of State veterinary service, and it behoved practitioners, however much Government service they might now be doing, to keep in touch with modern developments in this "bread-and-butter" side of our practice. He thought there was no class of work in country practice which made or marred the young practitioner more than his success or failure in parturition cases.

Of the *ante-partum* conditions mentioned he thought he found himself in the most hopeless and helpless position over cases of hydrops amnii. By the time we had been called in to these cases, the cow was emaciated and too weak to rise. The prognosis was most unfavourable and the cow if slaughtered was unfit for human consumption.

Mr. Wright had given a most useful piece of advice under the heading of "*Ante-partum* paralysis" which applied to all cases of the cow down and unable or unwilling to rise: "Make a careful examination *per rectum* for possible fractures of the pelvis to avoid a wrong diagnosis." He would also suggest turning the cow and examining the limbs on both sides. He had frequently found the shaft of the femur fractured in cows which failed to get up after milk fever treatment.

Mr. Shawcross thought prolapse of the vagina to be more prevalent now than formerly owing to the short beds and deep gutters in modern shippons. A big cow could not stand comfortably on the short bed and she stood with her hind feet in the gutter—the sloped hindquarters predisposing to prolapse of the vagina, and to eversion of the uterus if she calved in the stall. One of his clients had devised a very useful cradle which fitted across the gutter and was the same height as the bed of the stall. Drainage could pass underneath and it could easily be moved to any part of the shippon behind a cow "showing the bulk" or behind a cow at calving, if a loose box was not available. He agreed whole-heartedly with Mr. Wright's golden rules in dystokia, "Take your time and use lubricants." As regards lubrication he did not think there was anything to equal "Sapolav." He made this up as follows: Curd soap lb. i, glycerine ʒ iv, antiseptic (lysol or Dettol) ʒ ii, eucalyptus oil ♏ xxx, aqua 0 ii. Flake the soap, add to water, boil until soap is dissolved.

then add the other ingredients, adding eucalyptus when the mixture has cooled a little. This set fairly solid when cold. Before inserting his hands into the vagina Mr. Shawcross rubbed it thoroughly into his hands and arms to avoid occupational dermatitis, as well as to avoid friction of the genital passages. If the foetus was dry a handful might be taken into the uterus and smeared over the surface of the organ. When warmed up it became the nearest approach to the natural slimy contents of the uterus which was the ideal lubricant for the foetus.

Continuing, the speaker said that traction should not only be restrained but intermittent, following as near as possible the natural way of expelling the foetus, pulling when the dam strains and easing off in the intervals between the straining. This allowed time for expansion of the vagina and for creases in the mucous membrane to straighten out. By this method of traction injury to the vagina was reduced to a minimum.

In torsion of the uterus it was easy to make a mistake in deciding which way to roll the cow, if one did not remember the rule of rolling the cow in the same direction as the spiral folds in the vagina. Professor Dewar, in his obstetric lectures, used to say that the secret of success in reducing the twist was in rolling the cow quickly or with a jerk, a slow turn being a waste of time and energy. He (Mr. Shawcross) had on a number of occasions been successful in reducing a partial twist by vaginal taxis. If Mr. Wright tried applying a long-handled twitch to the calf's leg, he would find that the turning could be done with both hands and was less exhausting. Mr. Wright's advice in taking time to get a mental picture of the exact position of the calf or calves in dystokia was sound and saved much trouble and time later. Some years ago he nearly lost a good client, and his client lost a good cow, through an assistant failing to trace up the limbs presented. After a lot of fruitless traction it was discovered that a fore- and hind-limb of the same calf had been roped and the other fore-limb was turned back in the uterus. After the mistake was discovered the fault was soon rectified and delivery was easy, but the floor of the uterus was found to be ruptured. He was of the opinion that modern embryotomes saved a lot of labour and life; so far he had only used the Danish embryotome.

In raising the hindquarters of a cow he had recently adopted in preference to blocks and pulleys, the method of turning the cow over on to a long door. Two or three men could easily lift a big cow a yard high, when a bale of straw could be placed under the door to keep it in the raised position. If the cow was on her feet she could be made to stand on the door and be lifted just as easily.

He had not used spinal anaesthesia in calving cases, on the grounds that having straightened the calf he needed all the help the cow could give and that a contracting uterus was a good barrier against infection and was less susceptible to haemorrhage. He could not imagine Caesarian section ever becoming very popular in larger animals, but the operation had been done successfuly by Mr. Hugh Curtis last year.

The manual removal or non-removal of the foetal membranes and the subsequent douching or non-douching were vexed questions. Personally he thought one could not treat all cases alike. If the removal could be affected easily and without tearing and pulling the placenta and cotyledons to pieces, he thought it was better away. Otherwise the insertion of pessaries and general treatment until the placenta was in the condition to be taken away was less likely to damage the cow. Even up to the sixth, seventh or ninth day after calving, removal could be effected by gentle traction with two fingers through the *os uteri*.

If the uterus was moderately healthy he did not douche after removing the placenta as he considered that by the liberal use of Sapolav to aid the natural slimy secretion, any foreign matter in the uterus would be quickly discharged without straining, or discomfort to the cow. If, on the other hand, there was much accumulation of septic fluid in the uterus after the placenta had been removed or at any time later, he syphoned this away, then injected a non-irritating warm antiseptic solution and syphoned off again, until the uterus contracted about the hand almost like a glove. When this happened the risk of general infection was much reduced.

He was interested in Mr. Wright's treatment with salt solution, but he rather suspected that his success in leaving the solution in the uterus was due to its irritating effects, and the handling, causing the cow to strain and the uterus to contract, ejecting most of the fluid. He would like to give Isovacuil a trial when it was available. Some years ago he treated a number of cases by filling six or eight one-ounce gelatine capsules with ten volumes peroxide of hydrogen and an equal quantity of water. These were inserted into various parts of the uterus, the idea being that the action of the peroxide would separate the placenta from the cotyledons. The fluid was not syringed into the uterus, as most of it would be strained out before it could take effect. Actually what happened in most cases was that in two days' time there was nothing to be found in the uterus but a mass of thick slimy fluid which could easily be removed by hand. Most of the cases did well.

He had nothing to add to Mr. Wright's methods in inversion of the uterus except that he considered after-treatment very important. After reduction he used a modified purse-string suture of strong tape, which could be untied daily if

necessary and tied up again. About the third day there was often a temperature and the cow was off its feed due to accumulation of septic fluid in the uterus. When this was drained off the temperature soon dropped and the appetite improved. The same treatment might be necessary several times up to a week.

The only success he had had with amputation of the uterus had been by the second method referred to by Mr. Wright. By this method the stump is left outside the vagina and one could see what was happening to it. By the other method the stump disappeared for better or worse—usually the latter, septic peritonitis setting in.

Gangrenous vagina, mentioned by Mr. Wright, was a very troublesome condition in heifers after a hard calving and where little or no antisepsis had been practised. The vagina was like a piece of leather and the straining so intense and prolonged that death finally supervened from exhaustion. He asked Mr. Wright if he knew of any drug to stop straining in these cases. He did not agree with Mr. Wright's statement that rupture of the uterus was usually fatal; he had seen quite a number of such cases do well where the rupture had been in the upper part of the uterus and the placenta had been passed quickly. In these cases the uterus was best left severely alone as insertion of one's hands into the uterus opened up the tear, which might have been sealed with a fibrinous clot or a piece of omentum. He once had a case which did quite well after a tear, the length of the top of the uterus. The uterus, the first and the last time he felt inside, was half full of small intestines. The owner, against his advice, refused to have the cow slaughtered.

He was not quite clear about the condition mentioned by Mr. Wright under the heading *post-partum* paralysis (loin fallen). He understood cases of hind-quarter paralysis occurring in young heifers after calving, but he did not know how Mr. Wright differentiated his cases of *post-partum* paralysis in older cows after an easy calving, from milk fever. In his district farmers always referred to a cow down after calving as "loin fallen," but such cases responded to milk fever treatment.

Mr. Shawcross concluded by thanking Mr. Wright for his valuable paper.

Mr. J. Adamson, Jun., said he had been using an acriflavine pessary, incorporated in a soap base, which when dissolved in the uterus lathered and penetrated to the crevices of the cornua. He had not used Isovacuil, but was interested in any method of removing the afterbirth other than manual removal, which he disliked more than any other aspect of general practice. He asked if Mr. Wright had conducted any controlled experiments with Isovacuil or did he think that the end results in the cases he mentioned might possibly have been the same had he done nothing at all? In cases of inversion of the uterus where amputation is decided upon, the speaker wished to know how one could determine whether any of the intestine is present in the inverted uterus.

Mr. W. Walker expressed his appreciation of Mr. Wright's paper and his admiration of the essayist's presentation of such a large subject. It resulted, however, in only passing reference being made to much that was of great importance. In a discussion also, it would be impossible to deal with all the points in the paper, and he would content himself with referring to one or two.

For example, brief mention was made of mineral deficiency in connection with retention of the placenta. He personally would have dwelt on this subject, as he considered it deserved more than a passing reference. For several years now he had been led to associate mineral deficiency with many post-parturient diseases. He had found that on farms where the pastures were insufficiently limed, cows often calved, say, ten to 14 days before their time, and retained their placental membranes.

Retention of the after birth was undoubtedly associated with a chronic catarrhal infection of the womb, which he believed resulted in a firm adherence of the membranes to the maternal cotyledons, but mineral deficiency and particularly a calcium deficiency was undoubtedly not only a predisposing factor of the above condition but also of metritis and associated conditions.

He had used Isovacuil in one or two cases but had not found it to be 100 per cent. successful, and was interested to hear that Mr. Wright had had good results with it.

In inversion of the uterus he practically never found it necessary to suture the vulva after replacement; in fact he preferred not to do so, as sutures were not only a potential source of infection but also by their irritation they were likely to cause straining. A useful truss could be made from a light rope, and he considered it sufficient to apply this.

The President (Mr. G. Mayall) observed that retention of the cleansing occurred most frequently after premature birth and not after abortion. He had been using sodium hyposulphite in many prescriptions for a number of years and in conjunction with other drugs it had produced very good results: he would be sorry to be without it in his surgery. As regards heifers with prolapse of the uterus, it was generally a difficult task to return the organ and retain it, and almost always necessitated the use of chloroform and a vulva clamp. Gangrene of the vagina had mostly produced fatal results in his cases.

As regards *post-partum* paralysis, he had obtained some good results by blistering the animal's hocks as well as her loins.

In replying, Mr. Wright thanked those who had entered into the discussion, stating that they had been very generous and mild in their criticism. He agreed with Mr. Shawcross and emphasised again the need for careful examination of all those cases of cows being down before and after calving, to eliminate the possibility of pelvic and thigh injuries and fractures. He thanked Mr. Shawcross for the information concerning the lubricant which could be made very cheaply. He assured him that syringing out the uterus with salt solution did not cause heavy straining and was a wonderful agent for cleaning up the uterus. In those cases of a tightly adherent, thin, slimy cleansing, douching with salt solution before attempting removal made the task much easier. Mr. Wright said he was unable

to stop the straining in heifers with vaginitis. Mr. Shawcross had stated that death in these cases was due to exhaustion, but he (Mr. Wright) was confident from *post-mortem* examinations he had made that death was due to general septicaemia. In reply to Mr. Adamson concerning the length of time which should be allowed to elapse before interference in cases of delayed parturition, no fixed rule could be applied. Sharp exercise and pituitrin were both good aids. Since writing his paper Mr. Wright had used Isovacuil on further cases; the results obtained had not been all the makers claimed, but it was a product worth using. In two of the cases the placenta came away the next day; in two other cases no difference was noted even after a second injection, although manual removal appeared to have been made easier. In yet other cases simple traction after either the first or the second injection brought the membranes away quite easily. In all cases the injection of Isovacuil certainly seemed to have a good effect on the cow—those cases where they were off their feed began to eat next day. Mr. Walker had stressed the point that mineral deficiency was the main indirect cause of retained placenta. Mr. Wright agreed and said he had often found that in farms where milk fever is common, retained placenta is also common. As he had previously stated, in animals living nearer the natural state this trouble was not so prevalent as in the domesticated bovine of to-day. He agreed with Mr. Walker that when the uterus had been replaced properly, clamping and suturing were unnecessary; however, he always felt much happier if a clamp was applied for a few days. He agreed with Mr. Webster that spinal anaesthesia was a great aid in cases of inverted uterus where there is no means of pulling the cow up by the hocks; also that cases of the so-called "loin-fallen" or *post-partum* paralysis were due to mineral deficiency and were a form of milk fever, but he pointed out that many of the cases did not respond to milk fever treatment, *i.e.*, calcium injections or inflation. Concerning Mr. Aldred's point about the use of disinfectants on the uterus, he agreed that strong disinfectants should not be used; he generally used carbolised oil, and he found cod-liver oil a wonderful dressing for the wounded tissues, to which agent could be added any antiseptic such as Dettol.

Mr. Wright, in conclusion, thanked the President for his remarks and said that he was pleased to hear he favoured the use of sodium hyposulphite as an internal antiseptic as he himself used it extensively.

The meeting concluded with the passing of a hearty vote of thanks to Mr. Wright for his paper, and the payment of a similar tribute to the President for his conduct of the proceedings.

J. C. Baird, *Hon. Secretary.*

Sir Daniel Hall, Director of the John Innes Horticultural Institution, made the following comment during his Earl Grey Memorial lecture at King's College, Newcastle: "In the investigation of foot-and-mouth disease we have spent £200,000 and we have not solved this problem yet, but if £200,000 should seem a large sum think what the disease costs us. One attack alone—that of 1923-24—cost the country in compensation for slaughter over £3,000,000."

Veterinary Medical Association of Ireland*

ANNUAL GENERAL MEETING AT DUBLIN

The 1939 Annual General Meeting of the Veterinary Medical Association of Ireland was held at the Gresham Hotel, Dublin, on Monday, January 30th, 1939, at 7.30 p.m.

The following members were present: Prof. A. F. O'Dea (outgoing President), Profs. J. J. O'Connor, W. Kearney and T. G. Browne, Miss Bissett, Messrs. P. F. Dolan, J. J. Condon, P. E. Mullaney, J. E. Kenny, F. O'Leary, D. Doherty, P. A. Rogan, J. D. Whitty, L. M. Magee, P. J. Gaffney, J. J. O'Brien, F. S. Ringwood, M. J. MacClancy, J. P. Nowlan, D. B. Mahony, J. Campbell, P. M. McManus, Senator O'Donovan, Messrs. J. A. Flynn, P. A. McCorry, P. I. O'Donoghue and J. M. Murphy, Hon. Secretary.

Apologies for non-attendance were received from: Messrs. J. H. Norris, T. R. Mulcahy, E. W. Little, R. H. Lambert, T. McDermott Kelly and A. A. Donnelly.

The minutes of the November General Meeting held at the Veterinary College, Dublin, on Wednesday, November 30th, 1938, were read, confirmed and signed.

Report of the Hon. Secretary for the Year 1938.—As a copy of this Report had been circulated to every member the Report was taken as read.

It was proposed by Prof. Kearney, seconded by Mr. J. D. Whitty and passed unanimously that this Report be adopted.

Report of the Hon. Treasurer for the Year 1938.—As a copy of this Report had been circulated to every member the Report was taken as read.

It was proposed by Prof. O'Connor, seconded by Mr. M. J. MacClancy and passed unanimously that this report be adopted.

A vote of thanks to Mr. F. O'Leary was proposed by Mr. J. J. Condon, seconded by Mr. P. F. Dolan and passed unanimously. Tribute was paid to him for his good work during the year in producing a credit balance and much regret was expressed at his resignation.

It was proposed by Mr. J. J. Condon, seconded by Mr. J. E. Kenny and passed unanimously that Mr. Denis Reeves, M.R.C.V.S., D.V.S.M., be appointed Honorary Treasurer of the Association and that he also be appointed Honorary Treasurer for the administration of monies received for the Veterinary Benevolent Fund.

Proposed alteration of Rules.—A recommendation from the 1938 May General Meeting, "That the number of Vice-Presidents of this Association be reduced from two to one who shall be regarded

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as the President-Elect" was proposed by Mr. P. F. Dolan, seconded by Mr. J. M. Murphy and carried unanimously.

Election of Office Bearers for 1939

Messrs. P. A. McCorry, J. A. Flynn and Senator O'Donovan were appointed scrutineers.

The following officers were elected for the year 1939.

President.—Mr. John J. Condon.
Vice-President.—Mr. E. W. Little.
Honorary Secretary.—Mr. J. M. Murphy.
Honorary Treasurer.—Mr. Denis Reeves.

Members of Council

Elected 1938 (*for 2 years*)	*Elected* 1939 (*for 2 years*)
Mr. J. F. Timoney	Prof. Kearney
Mr. E. V. Kelly	Mr. J. E. Kenny
Mr. J. D. Whitty	Mr. P. E. Mullaney
Mr. J. A. Flynn	Mr. F. O'Leary
Mr. J. J. O'Brien	Mr. M. J. MacClancy

Induction of President

The outgoing President, Prof. A. F. O'Dea, then delivered the following valedictory address:

My term of office is now ending and, while nothing sensational has occurred during the year, I am glad to say that the activities of the Association have not been fruitless. Progress has been made in certain directions. We have had successes and some little disappointments. These are more or less incidental to any term of office.

During the time that I have had the honour of occupying the Presidential chair the Council and I have tried to maintain an even balance between all sections of the Association and, if any section has felt aggrieved at any decision, I would like to point out that complete unanimity in any body representing diversified views is very difficult to obtain; but, while the executive body bears in mind its primary duty—that is the advancement of the profession as a whole consonant with the agricultural and economic development of the country—it cannot go far wrong. I would like to point out too that, with the exception of those matters with which it is authorised to deal, the findings of the Council are subject to approval by the general body; disagreement with its findings should not, however, be too hasty because members of the Council are in closer touch with the views of the various units and with matters generally than the ordinary member could be, and further their deliberations are carried out in an atmosphere of detachment. I do not make these remarks with the object of stifling criticism, which I think is a healthy thing, but for the purpose of obtaining better understanding and, if possible, more complete co-operation between members in working for the common good. Election to the executive body is in the hands of the members and, as those elected are those who obtain the largest number of votes, it must be that they carry the confidence of the majority. Without that confidence and without sectional representation the Council could not function satisfactorily.

At each general meeting throughout the year addresses on veterinary subjects were presented. At the Spring Show meeting there were demonstrations of a practical nature and Mr. Martin Byrne presented a valuable and comprehensive paper on "Anaesthesia in Veterinary Practice." At the Horse Show meeting Mr. Louis Magee gave "Some notes on the Practitioner's Equipment." Mr. Magee covered a wide field. The relation of his suggestions for emergency adaptation will be found very helpful, especially by the younger generation of practitioners. At the November meeting Professor Nicholson read a paper on "The Regulation of the Female Sexual Cycle." To those interested in animal breeding, as most of us are, a knowledge of the scientific principles outlined in his address can be of great practical value. In June we had our joint annual meeting with the North of Ireland Veterinary Medical Association at Belfast. Very interesting demonstrations were given at Stormont in the afternoon and in the evening we were generously entertained at the Imperial Hotel. Afterwards a paper entitled "Observations on a Contagious Bovine Abortion Vaccine Experiment" was presented by Mr. W. A. Kerr, the discussion being opened by Mr. J. F. Timoney. Both the writer and the opener of the discussion are to be congratulated on the clear and candid exposition of the present state of our knowledge with regard to this disease and on the fund of scientific knowledge displayed. I am sure we all entertain very happy recollections of our visit.

For the second time within twelve months two of our colleagues, who were nominated by the Veterinary Council, have been elected members of Seanad Eireann. Their presence in the legislative assembly will, I trust, bring honour to themselves and to the profession. On your behalf and on my own I congratulate these gentlemen. The Council of the Association was about to make representations to the Minister for Agriculture with a view to having the profession represented on the Commission set up "To enquire into the Position of Agriculture in Ireland" when it was informed that our newly-elected Senators had already made effective representations in that respect. Our esteemed colleague Mr. A. A. Donnelly has since been nominated a member of that body—a happy choice indeed on the part of the Minister.

I regret to say that the position with regard to the Victoria Veterinary Benevolent Fund is not satisfactory. The amount dispensed by the

fund to the widows and orphans of veterinary surgeons in Eire is in excess of the amount received in subscriptions. I beg of you, gentlemen, to contribute generously towards the maintenance of the dependants of our deceased colleagues, and to support actively any venture towards the raising of funds for this worthy object.

The Honorary Secretary has submitted a very full annual report of the proceedings, and in doing so has relieved me of the task of speaking at any length and you of the tedium of listening to me. It is typical of his efficiency. Throughout the year Mr. Murphy has been untiring in his efforts to promote the welfare of the Association. Nobody can realise, except the President, the amount of energy he puts into his work. He has made my task an easy one indeed, and I can assure my successor that he need have no fears for the future. I thank Mr. Murphy sincerely.

The past Honorary Treasurer has been efficient and the accounts show a substantial credit balance. For that and many other services we owe Mr. O'Leary a debt of gratitude. I regret that circumstances compel him to resign, but I am glad to say that we have found a very competent successor. Mr. Reeves was reluctant to take over the responsibilities, and it is only a sense of duty to the profession that actuates him in doing so. He deserves the honour which the office carries.

To the members of the Council I am grateful for their assistance during my year of office, and to you all for your patience with my many shortcomings.

Now, gentlemen, the pleasant duty devolves on me of handing over office to my successor, Mr. Condon. In doing so, I feel assured that the welfare of the Association will be securely guarded, and its business under excellent direction.

Presidential Address

The President, Mr. J. J. Condon, M.R.C.V.S., then addressed the meeting as follows:

I deeply appreciate the honour you have conferred on me and the trust you have reposed in me in having selected me for the Presidential Chair for the coming year. I thank you cordially for such a manifestation of goodwill.

I am fully conscious that I bring to the position many shortcomings and imperfections, but while in no way endeavouring to aspire to the greatness and capacity of my predecessors in office, yet, to none of them will I yield in my love and respect for the profession of which I am proud to be a member and again to none of them will I yield in my enthusiasm for the welfare of this Association and for the well-being of its members. St. Paul said "I am a citizen of no mean city"—if, with propriety, I may borrow his idea, I can say of myself that I am a member of no mean profession.

I am not unmindful of the responsibility which the worthy occupancy of the high office of President will entail, but I think I can confidently hope for and bespeak your united help and co-operation with the very valuable and experienced assistance that is so freely and unselfishly given at all times by our worthy and esteemed Hon. Secretary—who by the way is an Association all unto himself; thus shall I be assured of freedom from the anxieties that are inevitably connected with that office.

It is surely fitting that on such an occasion as this, a public tribute should be paid to the unselfish services of the outgoing President, and that we should acclaim and applaud the admirable manner in which he has discharged his duties during his term of office. "Let us render unto Caesar the things that are Caesar's." It affords me much pleasure to tender to you, Professor O'Dea, our grateful appreciation. He has set a high standard for me—one that it will be difficult to approach, much less to reach; I fear that I can only follow him from afar, but the example which he has given will always be inspiring. I shall endeavour to do my utmost to maintain the traditions of the office which have been bequeathed to me.

In addressing you this evening I should like to issue an appeal to those who are not already members to join our ranks without delay and I would exhort existing members to be more regular in their attendance with a view to availing themselves of the many advantages that membership of this Association affords. Even at personal inconvenience it will repay us in these days of many professional perplexities to devise and accept opportunities of airing our views, of expressing our differences, and of taking common counsel.

Such conferences are all too infrequent. We realise to the full the difficulties, the many obstacles—well-nigh insurmountable—that will arise when cognisance is taken of distances and single-handed practices, but nevertheless an effort should be made to attend these meetings—it is well worth while.

Particularly is it of importance to the general practitioner and part-time inspector and more especially in this age of scientific advancement, if he wishes to be *au courant* with modern up-to-date treatment of disease. Science and research in conjunction with increased knowledge have further aided progressive development, with the result that many of the old orthodox methods of diagnosis and treatment have been superseded by ones more recent.

In attending these meetings, the practitioner is afforded an opportunity of discussing difficult and intricate cases with members of the College Faculty specialising in the various branches.

Speaking from my own experience, I am happy to say that those eminent Professors are always only too eager and willing to share their valuable academic knowledge with the practitioner in distress.

In an Association such as ours the sorely harassed, under-paid Part-Time Inspector, with his many, varied and ever-increasing duties, has a golden opportunity of ventilating his grievances with a view to their redress—a platform from which to proclaim to all and sundry that his public services are neither appreciated, recognised nor rewarded. Would it be too much to hope that as a result of the reasonable representations of an active virile Association some change of heart might be affected in the Powers that be to give effect to the establishment of permanency and pension during the coming year? This is our hope as it will be our aim. To achieve this ambition, to secure justice and our rights necessitates a unity of purpose and a solidarity of action. "United we stand, divided we fall." Is not this the very idea enshrined in the motto of our College, "*Vis Unita Fortior*" —Strength is rendered stronger by Unity?

It would hardly be out of place on an occasion such as this and in the presence of so many distinguished members of the veterinary profession, to emphasise to this Association the urgent necessity to impress upon our Government the desirability of establishing and endowing an adequate and generous fund for the purposes of veterinary research in this country. If such a fund were available, speaking as a practitioner of some knowledge and long experience, I would venture to predict that many of the losses and much of the mortality alas now too prevalent amongst our livestock could and would be avoided, with great advantage to the country and with great profit to the Irish farmer.

We are told that this is an age of research—if such be the case then let us have it. I do not hesitate to say that the intellectual equipment of our profession in Eire is of a high standard, but we are unable to utilise this material to the full on account of irritating financial restrictions. All foreign governments support and subsidise the maintenance of an efficient Veterinary Service in their respective countries, and above all deal generously with veterinary research work. It is of vital importance that our mental armoury should be replete with the latest and most scientific sources of veterinary knowledge and discovery.

We should endeavour to keep before us the high purpose and sublime significance of our veterinary vocation; our lives as professional men are, or should be, devoted to service—to the common good—whether our concern be for the individual, the area in which we reside or for the State, and as the sands of life run out it is this knowledge that we serve that ever encourages us to greater and higher things—that urges us to give of our best for the welfare and prosperity of our land. Sometimes we may be inclined to forget the greatness of the service which our calling renders—the extent of the usefulness we can achieve—the benefits we can confer by our ministrations. Our work is not small or unimportant. That is why we should ever remember the dignity and honour of the veterinary profession.

It shall be my most earnest and constant endeavour to give of my best to the responsible office which, on your invitation, I now assume. I trust that I may be able to pass on the position to my successor undiminished in dignity, and not I hope entirely devoid of aims achieved and hopes accomplished.

Together let us work for the good of the profession, for the welfare of its members, and for the national prosperity. Once again I thank you.

Mr. L. M. Magee welcomed the new President and proposed a sincere vote of thanks to him for his eloquent presidential address. He paid tribute to the work done by the outgoing President during the year and expressed the hope that the new President would have an even more successful year of office.

Mr. J. D. Whitty seconded the vote of thanks and heartily welcomed the new President. He complimented him upon his personal and professional qualities and wished him a successful year of office.

Mr. Condon, in reply, thanked the members for their kind remarks.

Vote of Thanks to retiring Officers.—A vote of thanks to the Office Bearers of the Association for 1938 was passed unanimously.

Council.—The Hon. Secretary read a short account of the proceedings of the Council Meeting held on January 10th, 1939.

New Members.—In this connection it was proposed by Mr. J. M. Murphy, seconded by Prof. O'Connor and passed unanimously that the members of the veterinary profession in Ireland, who are not already members of the Veterinary Medical Association be circularised and asked to join the Association.

Other Business.—The Hon. Secretary raised the question of obtaining a Chain or Badge of Office for the President of the Association. It was agreed that this question be referred to the next Council Meeting.

Obituary.—A vote of condolence to Mr. C. M. Griffin on the death of his wife was passed, all the members standing, and a similar tribute was paid to the memory of Mr. John P. O'Reilly, Department of Agriculture, a vote of condolence with the relatives being passed.

J. M. Murphy, *Hon. Secretary.*

Western Counties V.M.A.*

MEETING AT TAUNTON

A meeting of this Division was held at the Great Western Hotel, Taunton, on Wednesday, October 26th, 1938.

The President, Mr. J. K. Irvine, occupied the Chair, and there were also present: Messrs. R. B. Nelder, L. W. Bovett, W. Tweed, W. H. Chase, J. Fox, D. W. Menzies, E. B. D. Hall, C. V. Watkins, C. R. Parsons, G. Atkinson, A. G. Saunders, H. C. Wilkins, E. G. Conisbee, E. J. L. Norman, R. H. Smythe, C. Masson, W. L. Richardson, L. E. Perkins, G. Tullis, E. J. Thorburn, H. K. Roberts, S. J. Motton, J. C. Hally, A. A. Abbott, W. W. Stenning, J. T. Tinney, A. E. Gachet, W. B. Martin, E. White, D. Kirk, Alex Thomson, Colonels Head and Max Henry, Majors James and Rankin, Mrs. Thomson and Dr. Montgomerie.

Apologies for absence were received from Sir F. Hobday, Major Dunkin, Messrs. Norman, E. R. Edwards, R. E. L. Penhale, A. R. Smythe, R. Glave Saunders, H. W. Townson, F. T. Harvey, G. Harvey, C. Stephens, C. Head, H. B. Kauntze, P. W. Bloye, D. S. Barbour, E. C. Bovett, T. H. Irwin and Major Ascott.

The minutes of the previous two meetings, having been published in the *Veterinary Record*, were taken as read.

Correspondence.—A letter from the N.V.M.A. *re post-mortem* and laboratory technique was read, and the Secretary was requested to write for further details.

Election of new member.—Mr. G. Tullis, M.R.C.V.S., D.V.S.M., was unanimously elected a member of the Division.

Report on Courses in Poultry Diseases.—The question of refresher courses in poultry diseases was briefly discussed, arrangements having been kindly made by the Principal of the Seale-Hayne Agricultural College in conjunction with Mr. C. V. Watkins, for the running of courses in this connection.

Tuberculin Testing: Visit to Cotford Hospital Farm.—By kind permission of the Farm Committee of the Cotford Mental Hospital, a number of cattle were tested with some synthetic medium tuberculins by Dr. R. F. Montgomerie assisted by Mr. and Mrs. Thomson.

Members visited the farm with Dr. Montgomerie who then came back to the meeting room and gave an extremely interesting and much appreciated address on the subject of "Some recent work on the reliability of Synthetic Medium Tuberculin." [On this address was based the paper entitled "The Potency of Synthetic Medium Tuberculin for use in the Double Intradermal Test in Cattle," by Dr. Montgomerie and Mr. A. Thomson, published in our issue of December 24th, 1938 (*V.R.*, **50**, 52, 1759-1772).—*Editor.*].

The subject was freely discussed and the discussion was replied to in detail by Dr. Montgomerie.

At the conclusion of the meeting a vote of thanks to Dr. Montgomerie and his colleagues, proposed by the President, was carried with acclamation.

The interest aroused by the subject of the paper was evidenced by a record attendance.

S. J. Motton, *Hon. Secretary.*

*Received for publication March 22nd, 1939.

SOME CONTEMPORARY CONTRIBUTIONS TO OUR KNOWLEDGE OF ANIMAL HUSBANDRY

(*Continued from page* 428)

Potato Silage

Mr. Stephen Williams, of the Midland Agricultural College, contributes an article on potato silage in the March, 1939, issue of the *Journal of the Ministry of Agriculture* (Vol. xlv, No. 12).

Potatoes can be stored in three ways; by clamping the tubers, by drying them or by converting them into silage. Potato ensilage is a comparatively new process which is simple and practical and can preserve potatoes adequately for stock-feeding. The method used is as follows: The tubers are washed thoroughly and steamed for 45 minutes so that they are well cooked. During steaming they lose about 10 per cent. and during cooling another 5·5 per cent. of weight. Immediately after steaming and while still hot, the potatoes are mashed and packed tightly so as to exclude air. The mass is covered with wet sacks and these are in turn covered with a heavy layer of clay well rammed down. The cost of cooking and ensiling is about eight shillings per ton.

A special silo is being tested. It consists of two parallel walls, 4 ft. 0 in. high, 4 ft. 0 in. apart at their bases and 5 ft. 0 in. apart at the top. This forms a trench in which the steamed potatoes are packed and finally covered with bags and soil. The side walls are made of galvanised iron sheets supported by six-foot-long posts 4 in. × 3 in.; straw is packed round the outside.

After some two to four weeks, during which there is a further loss of water, the silage may be fed. Dry matter is about 31 per cent. Even after years (as shown by German workers) there is very little loss indeed in nutritive value. Practically all of the silage is readily eaten by pigs.

Feeding Trials.—The system adopted was to feed similarly to the Lehmann system, in which a pig receives about 2·2 lb. of a basic ration composed of 70 per cent. cereals and 30 per cent. protein food. The pig then satisfies its appetite by eating the potato silage.

Eight pairs of pigs were selected on a basis of age, weight, breeding and sex. One of each pair was allocated to the experimental and the other to the control pen. Pigs were slaughtered on reaching approximately 195 lb. live weight.

In Pen I—the experimental pen—the pigs were

fed on a ration of 2 lb. daily of the following mixture:—

Weatings	...	...	3	cwt.
Flaked maize	...	...	1	„
Maize meal	...	...	1	„
Barley meal	...	...	2	„
Fish meal	...	...	1½	„
*Meat and bone meal	...	...	1½	„
Cod-liver oil	...	...	1	gallon
			10	cwt.

*This contained 60 per cent. protein.

Potato silage was added. At first only about ¾ lb. per head was eaten daily, and 1 lb. of flaked maize was mixed with the silage to increase palatability. By the end of five weeks pigs were eating 3½ lb. daily and flaked maize was withdrawn. For the remaining time silage only was given in addition to the 2 lb. supplement. The amount eaten increased up to 15 lb. daily.

In Pen II—the control pen—the pigs were fed a standard fattening ration as follows:—

	Early stage	Final (fattening) stage
Weatings	4 cwt.	3½ cwt.
Flaked maize	2 „	2 „
Maize meal	1 „	1 „
Barley meal	2 „	3 „
Fish meal	1 „	½ „
Minerals—		
2 pt. limestone, 1 pt. 'dairy salt'.	10 lb.	10 lb.
Cod-liver oil	1 gal.	1 gal.

Of this they were given 2¾ lb. per head daily, which was increased by ¼ lb. per head up to a maximum of 7 lb.

The experiment was commenced on May 4th, 1938; from then until June 8th, 1938, is conveniently called the first period. The second period was from June 8th, 1938, until July 13th, 1938, and the third period was from this latter date until slaughter some 40 to 48 days later.

During the first period, at the end of which the experimental pigs weighed 90 lb. average, no potato silage was fed. In the second period, the eight pigs consumed 836 lb. of meal, and 676 lb. of potato silage. The controls ate 1,138 lb. of meal. In the third stage, the experimental pigs ate 717 lb. meal and 3,682 lb. of silage, while the controls ate 1,942 lb. of meal. Taking 3¼ lb. of potato silage as equivalent in feeding value to 1 lb. of meal, the potato-fed pigs consumed a total of 1,850 lb. of meal equivalent, while the controls ate 1,942 lb. As against this the control pigs showed an average of about 10 lb. per head more weight than the potato-fed pigs, *viz.*, 191·52 lb. against 181·6 lb. Further, the experimental-fed pigs showed a consumption of 3·78 lb. of meal per 1 lb. of live weight increase, as against 3·43 lb. of meal per 1 lb. live weight increase for the control pigs.

The silage-fed pigs grew more slowly during the three periods; they had somewhat dirty greasy skins (due to excessive protein), in the first period, and later trials showed that initially the amount of protein was too high. These trials improved the evidence in favour of silage added to a basic ration. The details of the second trial are given. The author reaches the following conclusions:—

(1) Potato ensilage is a successful and economical method of conserving potatoes for feeding to pigs. Very little or no nutritive value is lost in storage. The cost of manufacture on a small scale amounted to eight shillings per ton of raw potatoes, which includes the cost of steaming. This figure could be considerably reduced under normal working conditions.

(2) The silage may be fed to pigs weighing from 115 to 200 lb. at the rate of 7 to 15 lb. per head daily with 2 lb. meal mixture (containing 0·6 lb. protein-rich foods), or up to 12½ lb. daily fed with 3 lb. meal mixture (containing 0·3 lb. protein-rich foods).

(3) Very satisfactory results were obtained by giving pigs of 115 to 200 lb. live weight unlimited amounts of potato silage with 3 lb. of a simple weaner ration containing 50 per cent. weatings, 40 per cent. cereals and 10 per cent. fish meal.

(4) Three-and-a-quarter pounds of silage were equivalent in food value to one pound of cereal meal mixture.

Notes and News

The Editor will be glad to receive items of professional interest for inclusion in these columns.

Diary of Events

April 12th.—R.C.V.S. Committee Meetings.
April 12th.—Meeting of the Editorial Committee, N.V.M.A., at 36, Gordon Square, W.C.1, 4 p.m.
April 13th.—R.C.V.S. Committee Meetings.
April 14th.—R.C.V.S. Committee and Council Meetings.
April 14th.—Meeting of the Derbyshire Division, N.V.M.A., at Mickleover, near Derby, 2 p.m.
April 21st.—Meeting of the Sussex Division, N.V.M.A., at Brighton, 2.45 p.m.
April 21st.—Meeting of the Mid-West Division, N.V.M.A., at Bath, 2.30 p.m.
April 25th.—Meeting of the Ladies' Guild (V.V.B.F.) at 10, Red Lion Square, W.C.1, 3 p.m.
May 4th.—R.C.V.S. Council Election. Last day for nominations.
May 8th.—Animal Management Examination begins.
May 15th.—Rome Congress on Comparative Pathology begins.
May 18th.—R.C.V.S. Council Election Voting Papers issued.
May 25th.—R.C.V.S. Council Election Voting Papers due.
June 1st.—**Annual General Meeting, R.C.V.S.**
June 8th.—D.V.S.M. Examination begins.
June 20th.—R.C.V.S. Committee Meetings.
June 21st.—R.C.V.S. Committee Meetings.
June 21st.—**R.C.V.S. Annual Dinner.**
June 22nd.—R.C.V.S. Committee Meetings.
June 23rd.—R.C.V.S. Committee and **Council** Meetings.

July 23rd—28th.—N.V.M.A. Congress at Great Yarmouth and Gorleston-on-Sea.

R.C.V.S. OBITUARY

BURNDRED, William G., Major, R.A.V.C. (T.F. Res.) Graduated N. Edinburgh, May 24th, 1900. Died March, 1939; aged 60 years.

MAJOR W. G. BURNDRED, M.R.C.V.S.

Major Burndred, whose death we record above with much regret, had practised in Hanley for many years, and his loss will be felt deeply by his colleagues, by whom he was greatly esteemed.

He qualified at the New Veterinary College, Edinburgh, in 1900, and was First Fitzwygram Prizeman.

Major Burndred had been seriously ill for about a week, but his health for a much longer period had been indifferent. He had lived in the Potteries all his life, and founded his very successful practice as a veterinary surgeon in Hanley while a young man. His professional attainments and his kindly personality made him a host of friends in the district. His career there was unbroken except during the War years, when he served as a Major in the Royal Army Veterinary Corps in India.

After the War, he retained his interest in the Corps, and was Veterinary Officer with the Artillery, under Colonel Nicholson. He retired with the rank of Major.

Deep sympathy is extended to Mrs. Burndred, the widow, and to her two sons, Captain W. H. Burndred, who is serving with the British Army in India, and Mr. G. F. Burndred, who is a solicitor with the firm of Messrs. P. J. McKnight and Sons, Hanley.

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UNIVERSITY OF LONDON DEGREE OF B.Sc. (VETERINARY SCIENCE)

Following is the Pass List issued by the University of London in connection with the March, 1939, B.Sc. (Veterinary Science) Examinations:—

SECOND EXAMINATION: (Part I).—Arnold, Roger Malcolm; Boreham, Margaret Joan; Brain, Peter Gordon Parma; Guébel, René Schwitz; Purkis, Barbara Mary; Robins, John Harold; and Smith, Gordon John Edward (internal students); French, Thomas Henry, and Holland, Ernest Henry (external students), all of the Royal Veterinary College; and Paterson, Alexander Brown (external student), of Glasgow Veterinary College.

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MILK AS A FOOD

At the annual meeting of the Irish Association of Milk Producers, held in Dublin on February 16th, an interesting paper, from which we reproduce the following passages, was read by Professor T. G. Browne, M.R.C.V.S., Veterinary College of Ireland, Dublin, on the subject of "Milk as a Food":—

"The daily consumption per person of liquid milk in Great Britain is about 0·4 pint or about one-third of the minimum quantity that is desirable. In Denmark this figure is about 1·2 pint, Canada 1·1 pint, Norway 1·0 pint, U.S.A. 0·78 pint, Germany 0·5 pint, France 0·5 pint. In this country the figures available for Dublin and Limerick indicate that the average daily consumption is about 0·6 pint per person. This is higher than that for Great Britain but is only one-half that for Denmark, and is only about one-half of the minimum quantity desirable. A quantity of dried and condensed milk is, of course, being consumed. In mixed adult diet, milk condensed or dried by good modern methods has a nutritional value only slightly inferior to that of liquid milk.

"There are undoubtedly many people in this country, especially in the poorer parts of our cities and towns, who are suffering from inadequate physical development or from disease due to malnutrition or are living in a state of sub-normal health which could be improved if they consumed more milk. That this situation can exist in a country in which agricultural resources are so abundant and the arts of agriculture have been so improved that supply frequently tends to outstrip the demand, remains an outstanding problem for constructive statesmanship. The Government of this country provide £90,000 per annum for the supply of free milk to children under five years of age whose parents or guardians are in receipt of home or unemployment assistance. The allowance is 1 pint per day for one child, 1½ pints for two children and a maximum of 2 pints for three or more children. Under this scheme in the year 1936-37, 1,434,480 gallons were distributed to 57,780 children. Free milk is also distributed in this country under the Maternity and Child Welfare Scheme to children and mothers where necessary. Furthermore, free milk is distributed under the Schools Free Meals Scheme which gives a free meal a day including milk to each child in cases where it is considered necessary. Under this scheme in the year 1936-37, 40,000 children received free meals including milk."

Professor Browne proceeded to deal with the causes of this low level of milk consumption in Great Britain, citing, as one of them, the lack of purchasing power in the poorer classes of our community who actually need the milk more because their diet is usually less well balanced than that of their better-to-do neighbours. "Gauged by the standard of cheapness plus nutritive value a diet of milk and bread, though uninspiring, is probably the best that can be purchased at to-day's prices."

Dealing with the problem of "unsafe milk," Professor Browne said: "I am not for a moment attempting to minimise the dangers of the consumption of unsafe milk, but the public should be made to realise that if a demand were forthcoming for clean raw milk from herds guaranteed free from disease, especially tuberculosis, an increasing supply of such milk would be available within a comparatively short time. The public, however, must be prepared to pay a little more for such a guarantee and in this lies the crux of the whole question, for a large proportion of the public are indifferent when a little extra cost is involved. We must face the fact that clean milk from disease-free herds must of necessity cost more, at least for a time, than milk produced under less ideal conditions.

"If the consumption of milk should go up to any marked extent our dairy farmers would be only too delighted to be confronted with such a contingency and would, I hope, make full use of the knowledge at present available in the breeding and nutrition of dairy stock, and in the production of milk of as high a standard as circumstances permit. In such an event the numbers of cows and the home production of foodstuffs would have to be increased accordingly. On the basis of economic farming in a

relatively small country like our own it is most desirable that an increase in this type of production should take place. I would like to quote here figures published by Sherman some years ago in the United States of America which apply in a similar way in this country to-day. An acre of cultivated land yielded the following annual return (measured in nutritional units) when providing the commodities indicated.

"This table compares nutritional units produced on acre cultivated.

		Estimated Protein (lb.)	Total Calories
1	Milk	289 ...	712,000
2	Beef	74 ...	130,000
3	Mutton	59 ...	137,000
4	Poultry and Eggs ...	110 ...	149,000

"Apart from the higher calories indicated, milk contains certain well-known nutritional properties not found in many other foods.

"It will be seen from these figures that dairy farming would yield the greatest nutritional return per acre as compared with other foods from animal sources. The situation regarding improvement in the consumption of milk may be summarised in a few words. It depends mainly on the dietetic education of the consumer which depends in turn on an increase in the general level of the education in the country and also on specific efforts of educational agencies of all kinds, particularly of medical men and the staffs of clinics, schools, institutions and organisations, especially women's. In short, the quantitative problem is almost entirely an educational one."

In the course of subsequent observations concerning the circumstances affecting the composition of milk, Professor Browne said that there was a slight fall in the fat content of the milk with age, amounting to about 0·4 per cent. in cows of 13 years as compared with young animals, and, in regard to the factor of breed, he quoted the findings of Dr. Tocher, that the fat content of milk falls in the different breeds in the following order: Jersey, Guernsey, Kerry, Welsh, Ayrshire, Shorthorns, various crosses and British Friesians, the average per cent. being highest in the Jersey at 5·43 and lowest in the British Friesians at 3·63.

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BRITISH MILITARY HORSEMEN FOR NICE AND ROME

The War Office has granted permission for a British Officers' jumping team to compete in the International Horse Shows at Nice and Rome this month. The visits have been made possible by the directors of the International Horse Show at Olympia, who have guaranteed the expenses, and by the Institute of the Horse and Pony Club, which has worked to secure permission for British Army teams to compete abroad. A British Army team has never before visited Rome and it is many years since Italian officers competed in London. It is held that participation of teams in international horse shows is a valuable means of creating friendly contacts between the countries concerned and it is hoped that France and Italy will send officers to Olympia next June.

A COELACANTH FISH

A discovery of outstanding importance to systematic zoology was the subject of a paper read by Mr. J. R. Norman, Assistant Keeper in the Department of Zoology, British Museum (Natural History) to the Linnean Society, describing the living Coelacanth fish recently captured off the coast of Africa. The discovery of this surviving member of a family of fishes hitherto believed to have been extinct for 50,000,000 years has been called "one of the most amazing events in the realm of natural history in the twentieth century."

Mr. Norman said that shortly before Christmas, while fishing in about 40 fathoms off East London, Cape Province, a trawler belonging to the firm of Irvine & Johnson captured this fish in a mixed trawl catch of food fishes and sharks. It lived for some time after capture, and was described by the skipper as being a brilliant steel-blue colour when alive, with large dark-blue eyes. It was 5 ft. long, weighed 127 lb., and was noticed to be unusually oily.

On reaching port the fish was acquired by Miss Courtenay-Latimer, curator of the East London Museum, who at once wrote to Dr. J. L. B. Smith, of Rhodes University College, Grahamstown. He was on holiday at the time, so that the letter did not reach him for ten days, and by that time the fish had been skinned and mounted by a local taxidermist. Unfortunately the body, which had begun to decay, was thrown away, though the skull was kept. Two photographs of the fish, taken soon after its capture, had reached this country. The specimen itself was to be retained by the East London Museum.

It could be stated at once, Mr. Norman said, that there was no place for this fish in any classification of existing fishes, but that it was an undoubted member of a sub-class of the Bony Fishes, the Crossoptenygii, a group represented to-day by the rare and comparatively degenerate lung-fishes of the fresh waters of Africa, South America, and Australia.

There were three orders of Crossoptenygians: the Rhipidistia, of the Devonian and Carboniferous periods; the Actinistia, ranging from the Devonian to the Cretaceous; and the Dipneusti, including the existing Lung-fishes and a number of fossil forms. This fish clearly belonged to the Actinistia, and was, so far as could be judged from photographs, a typical member of the family Coelacanthidae.

The earliest Coelacanths occurred in rocks of the Upper Devonian period, and were probably not less than 300,000,000 years old. They were abundant and widespread throughout the Carboniferous, Permian, and Triassic, being found in Western Europe, North America, South Africa, Madagascar, and Spitsbergen. They then became less abundant, with less variety of type, until the Upper Cretaceous, when they were believed until now to have become extinct.

As to what was likely to be the normal habitat of this fish, and what were the chances of obtaining further specimens, the lecturer said he could not believe that it was ordinarily to be found on the grounds trawled by commercial vessels, although it was possible that previous specimens had been caught and thrown back into the sea. Probably the fish was either an inhabitant of much greater depths or of places where the sea-bottom was rocky and trawling impossible.

Its build suggested rather a slow swimmer and it seemed most likely to be a bottom-living form.

Long-baited lines perhaps held out the best chance of catching fresh specimens.

Professor D. M. S. Watson said that to those of them who had had to make reconstructions of fossil fish this opportunity of comparing their work with the real thing might give some satisfaction. The newly discovered fish was amazingly like reconstructions made of extinct Coelacanths, and was of considerable value as a test of the accuracy of the methods used in such work.

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RECENT RESEARCH ON CANCER

Nature (February 4th) refers among its research items to the thirty-sixth annual report of the Imperial Cancer Research Fund, which has just been published and which is the first to appear since the Fund moved into new laboratories at Mill Hill. This report says *Nature*, summarises the work carried out during the last year on carcinogenesis, the nature of tumour viruses, the action of radiations and of hormones and the properties of tissue cultures. Dr. F. R. Selbie and Dr. C. Foulds have extended knowledge on the carcinogenic action of radioactive substances. They obtained tumours at the site of injection with thorotrast (a colloidal preparation of thorium oxide) in rats, mice and guinea-pigs. There would seem to be little doubt that thorotrast should not be used clinically on account of its possible carcinogenic action on man. Dr. W. Cramer and Dr. E. S. Horning investigated the antagonism between oestrone and the hormones of the pituitary acidophil cells. In a preliminary experiment they have been able to inhibit the spontaneous incidence of mammary cancer in mice by treatment with preparations of the pituitary thyrotropic hormone. If fibroblasts and sarcoma cells are grown as tissue cultures in plasma, the sarcoma cells liquefy the clot more rapidly than do the non-malignant cells. Dr. R. J. Ludford has found that some trypanocidal agents such as trypan blue and Bayer 205 promote this liquefaction of the clot by cells, but this action is not specifically associated with tumour cells. Mr. H. G. Crabtree, in conjunction with Dr. L. H. Gray, of the Mount Vernon Hospital, found that the ability of isolated tumour tissue and isolated retina to produce lactic acid are both equally inhibited by equivalent doses of γ-radiation, β-radiation or by X-radiation when applied *in vitro* at low temperature."

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The provision of more milk is in the forefront of the Government's campaign against malnutrition. Sir Reginald Dorman-Smith, the new Minister of Agriculture, announced in the House of Commons recently that plans are in hand for the provision of milk at specially reduced prices for child welfare and maternity services under the control of local authorities.

Advertiser's Announcement

"Hypoloid" (Veterinary) "Infundin"

"Infundin" Pituitary (Posterior Lobe) Extract is being used to an increasing extent in veterinary practice as an oxytocic in difficult labours and for other purposes. In response to many requests, Burroughs Wellcome & Co. have introduced a special 10 c.c. packing for veterinary use. The product, which is known as "Hypoloid" (Veterinary) "Infundin," 10 International Units per c.c., is issued in rubber-capped bottles, from which repeated doses may be withdrawn without contamination of the contents. As animal doses of "Infundin" are generally on a higher scale than is customary in human medicine, this new packing should prove particularly useful to veterinary practitioners.

Correspondence

Letters to the Editor should reach the Office not later than by the first post on Tuesday morning for insertion in following Saturday's issue.

The views expressed in letters addressed to the Editor represent the personal view of the writer only and must not be taken as expressing the opinion or having received the approval of the N.V.M.A.

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CO-OPERATION WITH THE PEOPLE'S DISPENSARY FOR SICK ANIMALS

To the Editor of the Veterinary Record

Sir,—The controversy surrounding the arrangement arrived at between the Royal College of Veterinary Surgeons and the People's Dispensary for Sick Animals is apparently arousing the interest of many members of the profession, both for and against.

There is not the least doubt that if all the members of the profession had been asked for their opinion of the P.D.S.A. a few weeks ago, there would have been almost a 100 per cent. definitely opposed to this organisation.

A rapprochement has loomed in sight, however, and in view of this, I feel we should view the matter afresh.

At the outset, I think full marks must be given to the President, R.C.V.S., for making such a situation possible. As a body, we cannot fail to recognise that free clinics are now an established public want and necessity. The P.D.S.A. is at present fulfilling that necessity more than any other such body.

Their general secretary, Mr. Bridges-Webb, apparently realises that the help of our profession would be in the interests of their patients, their organisation, and the veterinary profession.

Mr. Bridges-Webb has, I understand, full powers to act for his organisation, and I feel sure Mr. Livesey and the sub-committee, appointed to deal with this matter, are satisfied that he is, to use a mild phrase, friendly disposed to our profession. This is as it should be, and we on our part should be prepared to collaborate in any arrangement which is to our mutual benefit.

The P.D.S.A. is very wealthy, has an immense public support and, although many details in the scheme may require elaborating or modifying, this is now possible; whereas previously it would have been impossible. As to whether the arrangement should first have been discussed by the various Branches of the N.V.M.A., or the parent body N.V.M.A., is no valid reason for rejecting the scheme. It is on trial, for one year, and is definitely optional to all members, and not obligatory. Personally, I feel we should make every effort to ensure the scheme is successful.

With collaboration, we can arrange that their staff be trained on lines similar to ordinary nursing staffs in hospitals, or R.A.V.C. Sergeants.

Charity will always be abused, but we shall now at least have some chance of checking and counteracting this abuse. The advantages to be gained by collaboration are enormous, as outlined in the last paragraph of the letter by Professor J. G. Wright in the *Veterinary Record* of March 25th.

Yours faithfully,

J. W. Procter.

3, The Crescent,
York.

To the Editor of the Veterinary Record

Sir,—In view of the fact that the proposed scheme of work with the People's Dispensary for Sick Animals is causing a great deal of controversy, would it not be more desirable to discuss this matter at the next meeting of the Congress at Yarmouth, instead of airing our views in the *Veterinary Record*, which is not confined to veterinary surgeons only, but probably now within reach of our unqualified *confrères* of the P.D.S.A.?

Yours faithfully,
Cyril Elphicke.

1, Rothsay Place,
Bedford.
April 3rd, 1939.

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P.D.S.A. Representative in France

To the Editor of the Veterinary Record

Sir,—One wonders whether the visit of Mr. F. Bridges-Webb to the Duke of Windsor in France, as reported in the *Veterinary Record* of April 1st, was occasioned through the Bill which passed the French Chamber of Deputies on January 28th, 1938, in which *Article 5* declares: "Any person who is not qualified as stated in Article 1 who shall habitually, with or without remuneration, practise the medicine or surgery of animals will do so illegally."

Article 1 is as follows: "Those persons only are authorised to practise the medicine and surgery of animals who are of French nationality and possess the State Diploma of Veterinary Surgeon or the State Diploma of Veterinary Doctor."

Yours faithfully,
G. Mayall.

Bolton.

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TREATMENT OF STERILITY

To the Editor of the Veterinary Record

Sir,—In your issue of April 1st, Mr. J. F. D. Tutt criticises a statement which he attributes to me in the discussion on Professor Nicholson's paper, reported in your issue of March 11th. Mr. Tutt observes that I am reported to have stated that there was no information on the value of the use of wheat germ oil (vitamin E) in the treatment of sterility. I should like to point out that I have not been so reported since the report of the discussion gave my statement correctly. It was "so far as he (the speaker) was aware no *properly controlled* experiments on the larger animals had been carried out with any of these agents" (wheat germ oil and certain biological products in the treatment of sterility). By the term "properly controlled," I referred to experiments with big numbers of the larger domesticated animals and equal numbers of similar control animals under identical condition with those in the treated group.

Yours faithfully,
T. G. Browne.

Veterinary College of Ireland,
Dublin.
April 3rd, 1939.

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To the Editor of the Veterinary Record

Sir,—I read with great interest Professor Browne's and Mr. J. F. D. Tutt's communications to the *Record* on the subject of sterility.

In regard to expression of the corpus luteum, in those cases of sterility—I refer particularly to sterility induced by trichomonas infection of that type associated with prolonged anoestrus—in which the corpus luteum is embedded, I think all experienced practitioners will agree that expression by manipulation is an impossibility and that attempts to use sufficient force to do so would be dangerous to life.

After considerable experience of this disease in four different herds I have come to the conclusion that oestrus did not return until the hyperplasia and cellular infiltration of the uterus with the associated typical uterine discharge had practically disappeared. The return to oestrus was then spontaneous. This could be expedited by treatment, which consisted of irrigation of the uterus with an acid or antiseptic solution. In some cases it was noted that natural recovery (no treatment having been given at all) occurred after a prolonged period of anoestrus; in some cases after as long as nine to 17 months, recovery being indicated by the spontaneous return to oestrus and its regular recurrence afterwards.

Every case in this category proved sterile subsequently, in spite of treatment in those cases considered of sufficient economic value.

This sterility appears to be due to changes in the uterine mucosa as a sequel of chronic endometritis or the persistence of chronic endometritis.

In my experience successful and economic treatment of trichomonas infection, particularly if associated with anoestrus, is dependent upon early diagnosis followed by appropriate treatment. There is no doubt that the return of the uterus to the near-normal is associated with a spontaneous return of oestrus.

It would be of interest to know if Abelein's experience shows that this new preparation induces return to oestrus *without* uterine irrigation as adjuvant treatment, and whether return to oestrus was associated with the disappearance of the uterine abnormality. Can Mr. Tutt give us any information as to the time taken to induce oestrus with the use of "provetan" in trichomoniasis?

Since contributing an article on this disease to the *Record* I have found that a combination of an acid with an antiseptic has given the most *rapid* results, inducing the return of the uterus to normal and the subsequent appearance of oestrus. I have found that it is not necessary to use a strong acid solution, but that the addition of ½ per cent. lactic acid to a 2 per cent. solution of Lugol's is superior to the use of either of these dressings alone. Once oestrus has been induced I give two further dressings, or more if necessary, at an interval of a week, of Lugol's 2 per cent. alone.

I intend to try the new preparation of "provetan" mentioned by Mr. Tutt in his letter.

It would appear that a rapid induction of oestrus should be associated with quicker recovery in this condition, and if this preparation is satisfactory it would be invaluable in the treatment of this particular type of trichomonas infection.

I am in process of preparing a paper dealing with further experiences in the treatment and control of this disease, which I hope to publish in the near future.

Yours faithfully,
G. N. Gould (Jun.), M.R.C.V.S.

"Rockholme,"
10, Landguard Road,
Southampton.
April 3rd, 1939.